BTEC

Pearson
BTEC Level 3 National Extended Certificates in Creative Digital Media Production

Digital Film and Video Production
Digital Content Production
Digital Games Production

Specification

First teaching from September 2018
First certification from 2019

Issue 4

Pearson

Pearson
BTEC Level 3 National Extended Certificates in Creative Digital Media Production

Digital Film and Video Production

Digital Content Production

Digital Games Production

Specification

First teaching September 2018

Issue 4

Edexcel, BTEC and LCCI qualifications

Edexcel, BTEC and LCCI qualifications are awarded by Pearson, the UK's largest awarding body offering academic and vocational qualifications that are globally recognised and benchmarked. For further information, please visit our qualifications website at qualifications.pearson.com. Alternatively, you can get in touch with us using the details on our contact us page at qualifications.pearson.com/contactus

About Pearson

Pearson is the world's leading learning company, with 35,000 employees in more than 70 countries working to help people of all ages to make measurable progress in their lives through learning. We put the learner at the centre of everything we do, because wherever learning flourishes, so do people. Find out more about how we can help you and your learners at qualifications.pearson.com

This specification is Issue 4. Key changes are sidelined. We will inform centres of any changes to this issue. The latest issue can be found on our website.

Welcome

With a track record built over 30 years of learner success, BTEC Nationals are widely recognised by industry and higher education as the signature vocational qualification at Level 3. They provide progression to the workplace either directly or via study at a higher level. Proof comes from YouGov research, which shows that 62% of large companies have recruited employees with BTEC qualifications. What's more, well over 100,000 BTEC students apply to UK universities every year and their BTEC Nationals are accepted by over 150 UK universities and higher education institutes for relevant degree programmes either on their own or in combination with A Levels.

Why are BTECs so successful?

BTECs embody a fundamentally learner-centred approach to the curriculum, with a flexible, unit-based structure and knowledge applied in project-based assessments. They focus on the holistic development of the practical, interpersonal and thinking skills required to be able to succeed in employment and higher education.

When creating the BTEC Nationals in this suite, we worked with many employers, higher education providers, colleges and schools to ensure that their needs are met. Employers are looking for recruits with a thorough grounding in the latest industry requirements and work-ready skills such as teamwork. Higher education needs students who have experience of research, extended writing and meeting deadlines.

We have addressed these requirements with:

- a range of BTEC sizes, each with a clear purpose, so there is something to suit each learner's choice of study programme and progression plans
- refreshed content that is closely aligned with employers' and higher education needs for a skilled future workforce
- assessments and projects chosen to help learners progress to the next stage. This means some are set by you to meet local needs, while others are set and marked by Pearson so that there is a core of skills and understanding that is common to all learners. For example, a written test can be used to check that learners are confident in using technical knowledge to carry out a certain job.

We are providing a wealth of support, both resources and people, to ensure that learners and their teachers have the best possible experience during their course. See *Section 10* for details of the support we offer.

A word to learners

Today's BTEC Nationals are demanding, as you would expect of the most respected applied learning qualification in the UK. You will have to choose and complete a range of units, be organised, take some assessments that we will set and mark, and keep a portfolio of your assignments. But you can feel proud to achieve a BTEC because, whatever your plans in life – whether you decide to study further, go on to work or an Apprenticeship, or set up your own business – your BTEC National will be your passport to success in the next stage of your life.

Good luck, and we hope you enjoy your course.

Collaborative development

Learners completing their BTEC Nationals in Creative Digital Media Production will be aiming to go on to employment, often via the stepping stone of higher education. It was, therefore, essential that we developed these qualifications in close collaboration with experts from professional bodies, businesses and universities, and with the providers who will be delivering the qualifications.

To ensure that the content meets providers' needs and provides high-quality preparation for progression, we engaged experts. We are very grateful to all the university and further education lecturers, teachers, employers, professional body representatives and other individuals who have generously shared their time and expertise to help us develop these new qualifications.

In addition, universities, professional bodies and businesses have provided letters of support confirming that these qualifications meet their entry requirements. These letters can be viewed on our website.

Summary of Pearson BTEC Level 3 National Extended Certificates in Creative Digital Media Production specification Issue 4 changes

Summary of changes made between the previous issue and this current issue	Page number
The wording in Section 7 *Teacher/centre malpractice* has been updated to clarify suspension of certification in certain circumstances.	Page 330
The wording under Section 9 *Understanding the qualification grade* has been updated to clarify current practice in ensuring maintenance and consistency of qualification standards.	Page 334

If you need further information on these changes or what they mean, contact us via our website at: qualifications.pearson.com/en/support/contact-us.html.

Contents

Introduction to BTEC National qualifications for the creative digital media production sector

This specification contains the information you need to deliver the Pearson BTEC Level 3 National Extended Certificates in Creative Digital Media Production. The specification signposts you to additional handbooks and policies. It includes all the units for these qualifications.

These qualifications are part of the suite of creative digital media production qualifications offered by Pearson. In the suite there are qualifications that focus on different progression routes, allowing learners to choose the one best suited to their aspirations.

All qualifications in the suite share some common units and assessments, allowing learners some flexibility in moving between qualifications where they wish to select a more specific progression route. The qualification titles are given below.

Within this suite are BTEC National qualifications for post-16 learners wishing to specialise in a specific industry, occupation or occupational group. The qualifications give learners specialist knowledge and technical skills, enabling entry to an Apprenticeship or other employment, or progression to related higher education courses. Learners taking these qualifications must have a significant level of employer involvement in their programmes.

In the creative digital media production sector these are:

Pearson BTEC Level 3 National Extended Certificate in Digital Film and Video Production (603/1910/0)

Pearson BTEC Level 3 National Extended Certificate in Digital Content Production (603/1911/2)

Pearson BTEC Level 3 National Extended Certificate in Digital Games Production (603/1912/4)

Pearson BTEC Level 3 National Diploma in Film and Television Production (720 GLH) 601/7470/5

Pearson BTEC Level 3 National Diploma in Film and Television Visual Effects (720 GLH) 601/7471/7

Pearson BTEC Level 3 National Diploma in Sound Production (720 GLH) 601/7474/2

Pearson BTEC Level 3 National Diploma in Digital Publishing (720 GLH) 601/7472/9

Pearson BTEC Level 3 National Diploma in Digital Games Design and Development (720 GLH) 601/7473/0.

Other BTEC National qualifications in this sector provide a broad introduction that gives learners transferable knowledge and skills. These qualifications are for post-16 learners who want to continue their education through applied learning. The qualifications prepare learners for a range of higher education courses either by meeting entry requirements in their own right or by being accepted alongside other qualifications at the same level and adding value to them. Learners may progress to one of the qualifications in this specification having completed a smaller qualification that provides suitable fundamental knowledge and skills.

In the creative digital media production sector these qualifications are:

Pearson BTEC Level 3 National Extended Certificate in Creative Digital Media Production (360 GLH) (601/7467/5)

Pearson BTEC Level 3 National Foundation Diploma in Creative Digital Media Production (510 GLH) (601/7468/7)

Pearson BTEC Level 3 National Extended Diploma in Creative Digital Media Production (1080 GLH) (601/7469/9).

This specification signposts all the other essential documents and support that you need as a centre in order to deliver, assess and administer the qualification, including the staff development required. A summary of all essential documents is given in *Section 7*. Information on how we can support you with these qualifications is given in *Section 10*.

The information in this specification is correct at the time of publication.

Total Qualification Time

For all regulated qualifications, Pearson specifies a total number of hours that it is estimated learners will require to complete and show achievement for the qualification: this is the Total Qualification Time (TQT). Within TQT, Pearson identifies the number of Guided Learning Hours (GLH) that we estimate a centre delivering the qualification might provide. Guided learning means activities, such as lessons, tutorials, online instruction, supervised study and giving feedback on performance, that directly involve teachers and assessors in teaching, supervising and invigilating learners. Guided learning includes the time required for learners to complete external assessment under examination or supervised conditions.

In addition to guided learning, other required learning directed by teachers or assessors will include private study, preparation for assessment and undertaking assessment when not under supervision, such as preparatory reading, revision and independent research.

BTEC Nationals have been designed around the number of hours of guided learning expected. Each unit in the qualification has a GLH value of 60, 90 or 120. There is then a total GLH value for the qualification.

Each qualification has a TQT value. This may vary within sectors and across the suite depending on the nature of the units in each qualification and the expected time for other required learning.

The following table show all the qualifications in this sector and their GLH and TQT values.

Qualifications, sizes and purposes at a glance

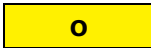| Title	Size and structure	Summary purpose
Pearson BTEC Level 3 National Extended Certificate in Creative Digital Media Production	360 GLH (480 TQT) Equivalent in size to one A Level. 4 units of which 3 are mandatory and 2 are external. Mandatory content (83%). External assessment (58%).	The qualification provides a coherent introduction to the study of creative digital media production at this level. Learners develop an understanding of the media industry through analysing media representations and pitching and producing media projects. It is designed for post-16 learners who aim to progress to higher education and ultimately to employment, possibly in the media industries, as part of a programme of study alongside other BTEC Nationals or A levels.
Pearson BTEC Level 3 National Foundation Diploma in Creative Digital Media Production	510 GLH (670 TQT) Equivalent in size to 1.5 A Levels. 6 units of which 4 are mandatory and 2 are external. Mandatory content (76%). External assessment (41%).	The qualification is designed for post-16 learners who want to progress to higher education, probably in a media related discipline. It is an opportunity for learners to understand more about the scope of creative digital media production and develop knowledge about the creative media industries. The qualification has been designed as a one year full time qualification, or a full two-year programme when studied alongside further level 3 qualifications.
Pearson BTEC Level 3 National Extended Diploma in Creative Digital Media Production	1080 GLH (1420 TQT) Equivalent in size to three A Levels. 13 units of which 7 are mandatory and 4 are external. Mandatory content (66%). External assessment (41%).	The qualification is designed for post-16 learners who want to study media related degree courses in Higher Education. Learners gain knowledge and understanding of creative digital media production and develop an understanding of how to work within the media industries. Learners can choose to follow a general programme of study, learning digital production skills in a variety of different media or they can chose to follow an endorsed route in Film, Television and Radio or Interactive Publishing and Media or Digital Games. The qualification is intended to be studied over two years as the substantial qualification in a learner's study programme.

Title	Size and structure	Summary purpose
Pearson BTEC Level 3 National Extended Certificate in Digital Film and Video Production	360 GLH (480 TQT) Equivalent in size to one A Level. Eleven units of which two are mandatory and one is external. Mandatory content (50%). External assessment (33%).	This qualification is designed to provide a technical introduction to digital film and video production. Learners develop skills in areas such as single and multi-camera techniques, sound recording and film editing. This qualification is for post-16 learners who are looking to progress to higher or degree apprenticeships, employment or to further education and training.
Pearson BTEC Level 3 National Extended Certificate in Digital Content Production	360 GLH (480 TQT) Equivalent in size to one A Level. Eleven units of which two are mandatory and one is external. Mandatory content (50%). External assessment (33%).	This qualification is designed to provide a technical introduction to digital content publishing. Learners develop skills in areas such as digital magazine production, image manipulation techniques and coding for web-based media. This qualification is for post-16 learners who are looking to progress to higher or degree apprenticeships, employment or to further education and training.
Pearson BTEC Level 3 National Extended Certificate in Digital Games Production	360 GLH (480 TQT) Equivalent in size to one A Level. Ten units of which two are mandatory and one is external. Mandatory content (50%). External assessment (33%).	This qualification is designed to provide a technical introduction to digital games production. Learners develop skills in areas such as games engine scripting, 3D modelling and environment and games testing. This qualification is for post-16 learners who are looking to progress to higher or degree apprenticeships, employment or to further education or training.
Pearson BTEC Level 3 National Diploma in Film and Television Production	720 GLH (950 TQT) Equivalent in size to two A Levels. 10 units of which 4 are mandatory and 2 are external. Mandatory content (50%). External assessment (33%).	This qualification is designed to give learners a technical understanding of film and television production. Learners gain knowledge and skills in areas such as single- and multi-camera techniques, lighting, sound recording and editing to produce practical film and television projects. The qualification is for post-16 learners and is intended as a two-year programme of study, normally in conjunction with one or more qualifications at Level 3. It is aimed at students looking to progress to employment in this sector.

Title	Size and structure	Summary purpose
Pearson BTEC Level 3 National Diploma in Film and Television Visual Effects	720 GLH (950 TQT) Equivalent in size to two A Levels. 10 units of which 5 are mandatory and 2 are external. Mandatory content (58%). External assessment (33%).	This qualification is designed to give learners a technical understanding of film and television visual effects. Learners produce film and television visual effects through practical projects and gain knowledge and skills in areas such as storyboarding, 2D and 3D animation, compositing and rendering techniques. The qualification is for post-16 learners and is intended as a two-year programme of study, normally in conjunction with one or more qualifications at Level 3. It is aimed at learners looking to progress to employment in this sector.
Pearson BTEC Level 3 National Diploma in Sound Production	720 GLH (950 TQT) Equivalent in size to two A Levels. 10 units of which 4 are mandatory and 2 are external. Mandatory content (50%). External assessment (33%).	This qualification is designed to give learners a technical understanding of sound production. Learners produce live radio broadcasts and learn to mix and edit sound for a variety of applications and media through practical projects that develop their audio production skills. The qualification is for post-16 learners and is intended as a two-year programme of study, normally in conjunction with one or more qualifications at Level 3. It is aimed at learners looking to progress to employment in this sector.
Pearson BTEC Level 3 National Diploma in Digital Publishing	720 GLH (945 TQT) Equivalent in size to two A Levels. 10 units of which 4 are mandatory and 2 are external. Mandatory content (50%). External assessment (33%).	This qualification is designed to give learners a technical understanding of digital publishing. Students gain knowledge and skills in areas such as website production, writing code, digital graphics, photography and image manipulation through practical projects where they produce digital media. The qualification is for post-16 learners and is intended as a two-year programme of study, normally in conjunction with one or more qualifications at Level 3. It is aimed at students looking to progress to employment in this sector.
Pearson BTEC Level 3 National Diploma in Digital Games Design and Development	720 GLH (950 TQT) Equivalent in size to two A Levels. 10 units of which 4 are mandatory and 2 are external. Mandatory content (50%). External assessment (33%).	This qualification is designed to give learners a technical understanding of the digital games industry. Learners develop digital games through practical projects in areas such as game engine scripting, 2D and 3D animation, 3D environments and coding for web based games The qualification is for post-16 learners and is intended as a two-year programme of study, normally in conjunction with one or more qualifications at Level 3. It is aimed at learners looking to progress to employment in this sector.

Structures of the qualifications at a glance

This table shows all the units and the qualifications to which they contribute. The full structure for this Pearson BTEC Level 3 National in Creative Digital Media Production is shown in *Section 2*. **You must refer to the full structure to select units and plan your programme.**

Key

[ ] Unit assessed externally	[M] Mandatory units	[O] Optional units	

DFVP Digital Film and Video Production **DCP** Digital Content Publishing **DGP** Digital Games Production

FTP Film and Television Production **FTVE** Film and Television Visual Effects **SP** Sound Production **DP** Digital Publishing **DGDD** Digital Games Design and Development

Unit (number and title)	Unit size (GLH)	Extended Certificate (360 GLH)			Diploma (720 GLH)				
		DFVP	DCP	DGP	FTP	FTVE	SP	DP	DGDD
1 Media Representations*	90								
2 Working in the Creative Media Industry*	90								
3 Digital Media Skills	120	M	M	M	M	M	M	M	M
4 Pre Production Portfolio*	90								
5 Specialist Subject Investigation*	120								
6 Media Campaigns*	90								
7 Media Enterprise	60				M	M	M	M	M
8 Responding to a Commission	120				M	M	M	M	M
9 App Production	60		O	O				O	O
10 Film Production – Fiction	60	M			M	M			
11 Radio Production – Fiction	60						M		
12 Website Production	60		O					M	
13 Digital Games Production	60			M					M
14 Digital Magazine Production	60		M					O	
15 Advertising Production*	60								
16 Factual Production*	60								
17 News Production*	60								

continued overleaf

Unit (number and title)	Unit size (GLH)	Extended Certificate (360 GLH)			Diploma (720 GLH)				
		DFVP	DCP	DGP	FTP	FTVE	SP	DP	DGDD
18 Storyboarding for Digital Media	60	O			O	O			
19 Scriptwriting	60	O			O		O		
20 Single Camera Techniques	60	O			O	O			
21 Film Editing	60	O			O	O			
22 Interviewing Techniques	60		O				O	O	
23 Stop Motion Animation	60	O			O				
24 Sound Editing	60	O			O	O	O		
25 Sound Recording	60	O			O		O		
26 Writing Copy	60		O					O	
27 Digital Photography	60		O					O	
28 Image Manipulation Techniques	60		O					O	
29 2D Digital Graphics	60		O					O	
30 Page Layout Design for Digital Media	60		O					O	
31 Coding for Web Based Media	60		O				O	O	
32 Concept Art for Computer Games	60			O					O
33 2D Animation	60			O		O			O
34 Game Engine Scripting	60			O					O
35 Multi Camera Techniques	60	O			O				
36 Lighting Techniques	60	O			O	O			
37 Visual Effects	60					M			
38 Sound Mixing	60						O		
39 Live Radio Broadcasting	60						O		
40 3D Modelling	60			O					O
41 3D Environments	60			O		O			O
42 Games Testing	60			O					O
43 3D Digital Animation	60			O		O			O

*For details of all qualifications in the BTEC National Level 3 Creative and Digital Media sector, please see *page 3.*

Qualification and unit content

Pearson has developed the content of the new BTEC Nationals in collaboration with employers and representatives from higher education and relevant professional bodies. In this way, we have ensured that content is up to date and that it includes the knowledge, understanding, skills and attributes required in the sector.

Each qualification in the suite has its own purpose. The mandatory content provides a balance of breadth and depth ensuring that all learners have a strong basis for developing technical skills required in the sector. Learners are then offered the opportunity to develop a range of technical skills and attributes expected by employers with some opportunity to select between optional units where a degree of choice for individual learners to study content relevant to their own progression choices is appropriate. It is expected that learners will apply their learning in relevant employment and sector contexts during delivery and have opportunities to engage meaningfully with employers.

The proportion of mandatory content ensures that all learners are following a coherent programme of study and acquiring the knowledge, understanding and skills that will be recognised and valued. Learners are expected to show achievement across mandatory units as detailed in *Section 2*.

BTEC Nationals have always required applied learning that brings together knowledge and understanding (the cognitive domain) with practical and technical skills (the psychomotor domain). This is achieved through learners performing vocational tasks that encourage the development of appropriate vocational behaviours (the affective domain) and transferable skills. Transferable skills are those such as communication, teamwork, planning and completing tasks to high standards, which are valued in both the workplace and in higher education.

Our approach provides rigour and balance, and promotes the ability to apply learning immediately in new contexts. Further details can be found in *Section 2*.

Centres should ensure that delivery of content is kept up to date. In particular units may include reference to regulation, legislation, policies and regulatory/standards organisations. This is designed to provide guidance on breadth and depth of coverage and may be adjusted to update content and to reflect variations within the UK.

Assessment

Assessment is specifically designed to fit the purpose and objective of the qualification. It includes a range of assessment types and styles suited to vocational qualifications in the sector. There are three main forms of assessment that you need to be aware of: external, internal and synoptic.

Externally-assessed units

Each external assessment for a BTEC National is linked to a specific unit. All of the units developed for external assessment are of 90 or 120 GLH to allow learners to demonstrate breadth and depth of achievement. Each assessment is taken under specified conditions, then marked by Pearson and a grade awarded. Learners are permitted to resit external assessments during their programme. You should refer to our website for current policy information on permitted retakes.

The styles of external assessment used for qualifications in the creative digital media production suite are:

- examinations – all learners take the same assessment at the same time, normally with a written outcome
- set tasks – learners take the assessment during a defined window and demonstrate understanding through completion of a vocational task
- performance – learners prepare for assessment over an extended window and demonstrate skills that generate some non-written evidence.

Some external assessments include a period of preparation using set information. External assessments are available once or twice a year. For detailed information on the external assessments please see the table in *Section 2*. For further information on preparing for external assessment see *Section 5*.

Internally-assessed units

Most units in the sector are internally assessed and subject to external standards verification. This means that you set and assess the assignments that provide the final summative assessment of each unit, using the examples and support that Pearson provides. Before you assess you will need to become an approved centre, if you are not one already. You will need to prepare to assess using the guidance in *Section 6*.

In line with the requirements and guidance for internal assessment, you select the most appropriate assessment styles according to the learning set out in the unit. This ensures that learners are assessed using a variety of styles to help them develop a broad range of transferable skills. Learners could be given opportunities to:

- demonstrate practical and technical skills
- complete realistic tasks to meet specific briefs or particular purposes
- write up the findings of their own research
- use case studies to explore complex or unfamiliar situations
- carry out projects for which they have choice over the direction and outcomes.

You will make grading decisions based on the requirements and supporting guidance given in the units. Learners may not make repeated submissions of assignment evidence. For further information see *Section 6*.

Synoptic assessment

Synoptic assessment requires learners to demonstrate that they can identify and use effectively, in an integrated way, an appropriate selection of skills, techniques, concepts, theories and knowledge from across the whole sector as relevant to a key task. BTEC learning has always encouraged learners to apply their learning in realistic contexts using scenarios and realistic activities that will permit learners to draw on and apply their learning. For these qualifications we have formally identified units which contain a synoptic assessment task. Synoptic assessment must take place after the teaching and learning of other mandatory units in order for learners to be able to draw from the full range of content. The synoptic assessment gives learners an opportunity to independently select and apply learning from across their programmes in the completion of a vocational task. Synoptic tasks may be in internally or externally assessed units. The particular unit that contains the synoptic tasks for this qualification is shown in the structure in *Section 2*.

Language of assessment

Assessment of the internal and external units for these qualifications will be available in English. All learner work must be in English. A learner taking the qualifications may be assessed in British or Irish Sign Language where it is permitted for the purpose of reasonable adjustment. For information on reasonable adjustments see *Section 7*.

Grading for units and qualifications

Achievement in the qualification requires a demonstration of depth of study in each unit, assured acquisition of a range of practical skills required for employment or progression to higher education, and successful development of transferable skills. Learners achieving a qualification will have achieved across mandatory units, including external and synoptic assessment.

Units are assessed using a grading scale of Distinction (D), Merit (M), Pass (P), Near Pass (N) and Unclassified (U). The grade of Near Pass is used for externally-assessed units only. All mandatory and optional units contribute proportionately to the overall qualification grade, for example a unit of 120 GLH will contribute double that of a 60 GLH unit.

Qualifications in the suite are graded using a scale of P to D*, **or** PP to D*D*, **or** PPP to D*D*D*. Please see *Section 9* for more details. The relationship between qualification grading scales and unit grades will be subject to regular review as part of Pearson's standards monitoring processes on the basis of learner performance and in consultation with key users of the qualification.

UCAS Tariff points

The BTEC Nationals attract UCAS points. Please go to the UCAS website for full details of the points allocated.

1 Qualification purpose

In this section you will find information on the purpose of these qualifications:

Pearson BTEC Level 3 National Extended Certificate in Digital Film and Video Production

Pearson BTEC Level 3 National Extended Certificate in Digital Content Production

Pearson BTEC Level 3 National Extended Certificate in Digital Games Production.

On our website we publish a full 'Statement of Purpose' for each qualification. These statements are designed to guide you and potential learners to make the most appropriate choice about the size of qualification that is suitable at recruitment.

Pearson BTEC Level 3 National Extended Certificate in Digital Film and Video Production

In this section you will find information on the purpose of this qualification and how its design meets that purpose through the qualification objective and structure. We publish a full 'Statement of Purpose' for each qualification on our website. These statements are designed to guide you and potential learners to make the most appropriate choice about the size of qualification suitable at recruitment.

Who is this qualification for?

The Pearson BTEC Level 3 National Extended Certificate in Digital Film and Video Production is intended as a Tech Level qualification, equivalent in size to one A Level and, as such, is designed to meet the Tech Bacc measure if studied alongside Level 3 mathematics and the Extended Project Qualification (EPQ). This size of qualification allows learners to study related and complementary qualifications without duplication of content. It provides good preparation for learners considering an apprenticeship in the creative and design route. When taken alongside further Level 3 qualifications, it also supports access to a range of higher education courses in film and video production and the wider media industry.

As well as direct entry to employment, this qualification provides preparation for higher study of a specialist degree or BTEC Higher National Diploma. This route gives learners the opportunity to enter the sector at a higher level, or in a more specialist role.

No prior study of the sector is needed, but learners should normally have a range of achievement at Level 2, in GCSEs or equivalent qualifications, including English, mathematics and science.

What does this qualification cover?

The content of this qualification has been developed in consultation with employers and professional bodies to ensure that it is appropriate for those interested in working in the sector. In addition, higher education representatives have been involved to ensure that the qualification fully supports entry to the relevant range of specialist degrees.

There are two mandatory units, which cover the following aspects of digital film and video production:

- film production (fiction)
- digital media skills.

In addition to the mandatory content, learners take three optional units, from a choice of nine. Optional units will introduce learners to sector specialist areas, including working in particular environments, and will link with relevant technical roles. The optional units cover areas such as:

- multi-camera and single-camera techniques
- sound recording
- editing
- lighting.

This qualification has been designed to support progression to a range of employment opportunities in digital film and video production, and to a range of higher education courses. While taking this qualification, it is expected that learners will engage with sector employers as part of their course, where they will be given opportunities to develop practical skills in preparation for employment.

What could this qualification lead to?

Depending on the optional units taken, this qualification provides preparation for entry level roles in the digital film and video production industry, such as:

- production runner/assistant
- post-production runner
- broadcast assistant
- animation assistant
- assistant to the camera crew.

If taken alongside additional Level 3 qualifications, learners could increase their professional industry skills and competencies, and have increased responsibilities in the above job roles.

Additional qualifications could include:

- Pearson BTEC Level 3 National Extended Certificate in Performing Arts
- Pearson BTEC Level 3 National Extended Certificate in Art and Design
- AS/A Level Business Studies.

There are many roles in this sector where recruitment is at graduate level. The qualification carries UCAS points and is recognised by higher education providers as contributing to meeting admission requirements for many relevant courses. For example, if taken alongside A Levels in English and business studies, or a BTEC Level 3 National Diploma in a relevant field of study, such as music or art and design, it could lead to a:

- BA (Hons) in Film and Television Production
- BA (Hons) in Film and Animation
- BSc (Hons) in Film Production Technology.

Learners may also progress to a higher and degree apprenticeship.

Entry requirements for degree programmes should always be checked with specific higher education providers.

Pearson BTEC Level 3 National Extended Certificate in Digital Content Production

In this section you will find information on the purpose of this qualification and how its design meets that purpose through the qualification objective and structure. We publish a full 'Statement of Purpose' for each qualification on our website. These statements are designed to guide you and potential learners to make the most appropriate choice about the size of qualification suitable at recruitment.

Who is this qualification for?

The Pearson BTEC Level 3 National Extended Certificate in Digital Content Production is intended as a Tech Level qualification, equivalent in size to one A Level and, as such, is designed to meet the Tech Bacc measure, if studied alongside Level 3 mathematics and the Extended Project Qualification (EPQ). This size of qualification allows learners to study related and complementary qualifications without duplication of content. It provides good preparation for learners considering an Apprenticeship in the creative and design route. When taken alongside further Level 3 qualifications, it also supports access to a range of higher education courses in the wider media industry.

As well as direct entry to employment, this qualification will prepare learners for higher study of a specialist degree or BTEC Higher National Diploma. This route will give them the opportunity to enter the sector at a higher level, or in a more specialist role.

No prior study of the sector is needed, but learners should normally have a range of achievement at Level 2, in GCSEs or equivalent qualifications, including English, mathematics and science.

What does this qualification cover?

The content of this qualification has been developed in consultation with employers and professional bodies to ensure that it is appropriate for those interested in working in the sector. In addition, higher education representatives have been involved to ensure that the qualification fully supports entry to the relevant range of specialist degrees.

There are two mandatory units, which cover the following aspects of digital content production:
- digital magazine production
- digital media skills.

In addition to the mandatory content, learners take three optional units, from a choice of nine. Optional units will introduce learners to sector specialist areas, including working in particular environments, and will link with relevant technical roles. The optional units cover areas such as:
- web and app production
- writing copy
- digital photography and image manipulation
- graphics and layout.

This qualification has been designed to support progression to a range of employment opportunities in digital content production, and to a range of higher education courses. While taking this qualification, it is expected that learners will engage with sector employers as part of their course, where they will be given opportunities to develop practical skills in preparation for employment.

What could this qualification lead to?

Depending on the optional units taken, this qualification provides preparation into entry level roles in the digital content production industry, such as:
- junior content producer
- junior designer
- junior researcher
- web co-ordinator
- trainee/assistant photographer
- digital assistant
- junior journalist.

If taken alongside additional Level 3 qualifications, learners could increase their professional industry skills and competencies, and have increased responsibilities in the above job roles.

Additional qualifications could include:

- Pearson BTEC Level 3 National Extended Certificate in Computing
- AS/A Level Business Studies.

There are many roles in this sector where recruitment is at graduate level. The qualification carries UCAS points and is recognised by higher education providers as contributing to meeting admission requirements to many relevant courses. For example, if taken alongside A Levels in English and business studies, or a BTEC Level 3 National Diploma in a relevant field of study, such as computing or business, it could lead to a:

- BA (Hons) in Advertising
- BA (Hons) in Marketing
- BSc (Hons) in Interactive Design and Development.

Learners may also progress to a higher or degree apprenticeship.

Entry requirements for degree programmes should always be checked with specific higher education providers.

Pearson BTEC Level 3 National Extended Certificate in Digital Games Production

In this section you will find information on the purpose of this qualification and how its design meets that purpose through the qualification objective and structure. We publish a full 'Statement of Purpose' for each qualification on our website. These statements are designed to guide you and potential learners to make the most appropriate choice about the size of qualification suitable at recruitment.

Who is this qualification for?

The Pearson BTEC Level 3 National Extended Certificate in Digital Games Production is intended as a Tech Level qualification, equivalent in size to one A Level and, as such, is designed to meet the Tech Bacc measure, if studied alongside Level 3 mathematics and the Extended Project Qualification (EPQ). This size of qualification allows learners to study related and complementary qualifications without duplication of content. It provides good preparation if learners are considering an Apprenticeship in the creative and design route. When taken alongside further Level 3 qualifications, it also supports access to a range of higher education courses in the wider media industry.

As well as direct entry to employment, this qualification will prepare learners for higher study of a specialist degree or BTEC Higher National Diploma. This route gives learners the opportunity to enter the sector at a higher level, or in a more specialist role.

No prior study of the sector is needed, but learners should normally have a range of achievement at Level 2, in GCSEs or equivalent qualifications, including English, mathematics and science.

What does this qualification cover?

The content of this qualification has been developed in consultation with employers and professional bodies to ensure that it is appropriate for those interested in working in the sector. In addition, higher education representatives have been involved to ensure that the qualification fully supports entry to the relevant range of specialist degrees.

There are two mandatory units, which cover the following aspects of digital games production:
- digital games production
- digital media skills.

In addition to the mandatory content, learners take three optional units, from a choice of nine. Optional units will introduce learners to sector specialist areas, including working in particular environments, and will link with relevant technical roles. The optional units cover areas such as:
- animation
- concept art
- 3D modelling and environment
- games engine scripting
- games testing.

This qualification has been designed to support progression to a range of employment opportunities in digital games production, and to a range of higher education courses. While taking this qualification, it is expected that learners will engage with sector employers as part of their course, where they will be given opportunities to develop practical skills in preparation for employment.

What could this qualification lead to?

Depending on the optional units chosen, this qualification will prepare learners for employment in the games industry, in entry level roles, such as:
- games tester
- communities manager.

However, employment in this sector is primarily at graduate level and to access additional roles, learners will benefit from taking additional Level 3 qualifications, which will increase their skills and competencies. Subjects that would complement this qualification include:

- Pearson BTEC Level 3 National Extended Certificate in Computing
- AS/A Level Art and Design.

This will support learners to access higher technical courses in digital animation and games development which in turn will lead to employment in this sector.

Recruitment in this sector is primarily at graduate level. The qualification carries UCAS points and is recognised by higher education providers as contributing to meeting admission requirements to many relevant courses. For example, if taken alongside A Levels in physics and mathematics, or a BTEC Level 3 National Diploma in a relevant field of study, such as computing or art and design, it could lead to a:

- BA (Hons) in Computer Games Art
- BSc (Hons) in Games Design Technology
- BSc (Hons) in Games and Animation Production.

Learners may also progress to a higher or degree apprenticeship.

Entry requirements for degree programmes should always be checked with specific higher education providers.

How do these qualifications provide employability and technical skills?

In the BTEC National units there are opportunities during the teaching and learning phase to give learners practice in developing employability skills. Where employability skills are referred to in this specification, we are generally referring to skills in the following three main categories:

- **cognitive and problem-solving skills:** use critical thinking, approach non-routine problems applying expert and creative solutions, use systems and technology
- **intrapersonal skills:** communicating, working collaboratively, negotiating and influencing, self-presentation
- **interpersonal skills:** self-management, adaptability and resilience, self-monitoring and development.

There are also specific requirements in some units for assessment of these skills where relevant, for example, where learners are required to undertake real or simulated activities.

Many of mandatory and specified optional units encourage learners to develop the specific practical skills that employers are looking for.

How does the qualification provide transferable knowledge and skills for higher education?

All BTEC Nationals provide transferable knowledge and skills that prepare learners for progression to university or other higher study either immediately or for career progression. The transferable skills that universities value include:

- the ability to learn independently
- the ability to research actively and methodically
- being able to give presentations and being active group members.

BTEC learners can also benefit from opportunities for deep learning where they are able to make connections among units and select areas of interest for detailed study. BTEC Nationals provide a vocational context in which learners can become prepared for lifelong learning through:

- reading technical texts
- effective writing
- analytical skills
- creative development
- preparation for assessment methods used in degrees.

2 Structure

Qualification structure

The structure for the qualifications in this specification are:

Pearson BTEC National Level 3 Extended Certificate in Digital Film and Video Production, *page 17*

Pearson BTEC National Level 3 Extended Certificate in Digital Content Production, *page 18*

Pearson BTEC National Level 3 Extended Certificate in Digital Games Production, *page 19*.

Pearson BTEC Level 3 National Extended Certificate in Digital Film and Video Production

Mandatory units

There are two mandatory units, one internal and one external. Learners must complete and achieve at Near Pass grade or above in all mandatory external units and achieve a Pass or above in all mandatory internal units.

Optional units

Learners must complete at least three optional units and achieve at least two.

Unit number	Unit title	GLH	Type	How assessed
Pearson BTEC Level 3 National Extended Certificate in Digital Film and Video Production				
	Mandatory units group A – learners complete and achieve all units			
3	Digital Media Skills	**120**	**Mandatory and Synoptic**	External
10	Film Production – Fiction	**60**	**Mandatory**	Internal
	Optional units group B – learners complete three units			
18	Storyboarding for Digital Media	**60**	**Optional**	Internal
19	Scriptwriting	**60**	**Optional**	Internal
20	Single Camera Techniques	**60**	**Optional**	Internal
21	Film Editing	**60**	**Optional**	Internal
23	Stop Motion Animation	**60**	**Optional**	Internal
24	Sound Editing	**60**	**Optional**	Internal
25	Sound Recording	**60**	**Optional**	Internal
35	Multi Camera Techniques	**60**	**Optional**	Internal
36	Lighting Techniques	**60**	**Optional**	Internal

Pearson BTEC Level 3 National Extended Certificate in Digital Content Production

Mandatory units

There are two mandatory units, one internal and one external. Learners must complete and achieve at Near Pass grade or above in all mandatory external units and achieve a Pass or above in all mandatory internal units.

Optional units

Learners must complete at least three optional units and achieve at least two.

Pearson BTEC Level 3 National Extended Certificate in Digital Content Production				
Unit number	**Unit title**	**GLH**	**Type**	**How assessed**
	Mandatory units group A – learners complete and achieve all units			
3	Digital Media Skills	**120**	**Mandatory and Synoptic**	External
14	Digital Magazine Production	**60**	**Mandatory**	Internal
	Optional units group B – learners complete three units			
9	App Production	**60**	**Optional**	Internal
12	Website Production	**60**	**Optional**	Internal
22	Interviewing Techniques	**60**	**Optional**	Internal
26	Writing Copy	**60**	**Optional**	Internal
27	Digital Photography	**60**	**Optional**	Internal
28	Image Manipulation Techniques	**60**	**Optional**	Internal
29	2D Digital Graphics	**60**	**Optional**	Internal
30	Page Layout Design for Digital Media	**60**	**Optional**	Internal
31	Coding for Web Based Media	**60**	**Optional**	Internal

Pearson BTEC Level 3 National Extended Certificate in Digital Games Production

Mandatory units

There are two mandatory units, one internal and one external. Learners must complete and achieve at Near Pass grade or above in all mandatory external units and achieve a Pass or above in all mandatory internal units.

Optional units

Learners must complete at least three optional units and achieve at least two.

Unit number	Unit title	GLH	Type	How assessed
Pearson BTEC Level 3 National Extended Certificate in Digital Games Production				
	Mandatory units group A – learners complete and achieve all units			
3	Digital Media Skills	**120**	**Mandatory and Synoptic**	External
13	Digital Games Production	**60**	**Mandatory**	Internal
	Optional units group B – learners complete 3 units			
9	App Production	**60**	**Optional**	Internal
32	Concept Art for Computer Games	**60**	**Optional**	Internal
33	2D Animation	**60**	**Optional**	Internal
34	Game Engine Scripting	**60**	**Optional**	Internal
40	3D Modelling	**60**	**Optional**	Internal
41	3D Environments	**60**	**Optional**	Internal
42	Games Testing	**60**	**Optional**	Internal
43	3D Digital Animation	**60**	**Optional**	Internal

Learners must not register on more than one of these BTEC Level 3 National Extended Certificates, owing to overlap of content and assessment.

External assessment

This is a summary of the type and availability of external assessment, which is of units making up 33% of the total qualification GLH. See *Section 5* and the units and sample assessment materials for more information.

For assessment from 2019 onwards refer to SAMS Issue 3 and unit content in this issue which replaces the 2017 versions.

Unit	Type	Availability
Unit 3: Digital Media Skills	• A single task set and marked by Pearson and completed under supervised conditions. • Learners will be provided with a brief for a 8 week preparatory period timetabled by Pearson • The supervised assessment period is 20 hours. • Practical submission. • 60 marks.	**May/June** **For assessment from January 2019 onwards**

Synoptic assessment

The mandatory synoptic assessment requires learners to apply learning from across the qualification to the completion of a defined vocational task. Within the assessment for *Unit 3: Digital Media Skills* learners complete a practical task where they construct a media product to a specified brief and within a chosen medium. Learners will draw on their understanding of media production from across the qualification to produce the products. Learners complete the task using knowledge and understanding from their studies of the sector and apply both transferable and specialist knowledge and skills.

In delivering the unit you need to encourage learners to draw on their broader learning so they will be prepared for the assessment.

Employer involvement in assessment and delivery

You need to ensure that learners on this qualification have a significant level of employer involvement in programme delivery or assessment. See *Section 4* for more information.

3 Units

Understanding your units

The units in this specification set out our expectations of assessment in a way that helps you to prepare your learners for assessment. The units help you to undertake assessment and quality assurance effectively.

Each unit in the specification is set out in a similar way. There are two types of unit format:

- internal units
- external units.

This section explains how the units work. It is important that all teachers, assessors, internal verifiers and other staff responsible for the programme review this section.

Internal units

Section	Explanation
Unit number	The number is in a sequence in the sector. Numbers may not be sequential for an individual qualification.
Unit title	This is the formal title that we always use and it appears on certificates.
Level	All units are at Level 3 on the national framework.
Unit type	This shows if the unit is internal or external only. See structure information in *Section 2* for full details.
GLH	Units may have a GLH value of 120, 90 or 60 GLH. This indicates the numbers of hours of teaching, directed activity and assessment expected. It also shows the weighting of the unit in the final qualification grade.
Unit in brief	A brief formal statement on the content of the unit that is helpful in understanding its role in the qualification. You can use this in summary documents, brochures etc.
Unit introduction	This is designed with learners in mind. It indicates why the unit is important, how learning is structured, and how learning might be applied when progressing to employment or higher education.
Learning aims	These help to define the scope, style and depth of learning of the unit. You can see where learners should be learning standard requirements ('understand') or where they should be actively researching ('investigate'). You can find out more about the verbs we use in learning aims in *Appendix 2*.
Summary of unit	This new section helps teachers to see at a glance the main content areas against the learning aims and the structure of the assessment. The content areas and structure of assessment are required. The forms of evidence given are suitable to fulfil the requirements.
Content	This section sets out the required teaching content of the unit. Content is compulsory except when shown as 'e.g.'. Learners should be asked to complete summative assessment only after the teaching content for the unit or learning aim(s) has been covered.

Section	Explanation
Assessment criteria	Each learning aim has Pass and Merit criteria. Each assignment has at least one Distinction criterion.
	A full glossary of terms used is given in *Appendix 2*. All assessors need to understand our expectations of the terms used.
	Distinction criteria represent outstanding performance in the unit. Some criteria require learners to draw together learning from across the learning aims.
Essential information for assignments	This shows the maximum number of assignments that may be used for the unit to allow for effective summative assessment, and how the assessment criteria should be used to assess performance.
Further information for teachers and assessors	The section gives you information to support the implementation of assessment. It is important that this is used carefully alongside the assessment criteria.
Resource requirements	Any specific resources that you need to be able to teach and assess are listed in this section. For information on support resources see *Section 10*.
Essential information for assessment decisions	This information gives guidance for each learning aim or assignment of the expectations for Pass, Merit and Distinction standard. This section contains examples and essential clarification.
Links to other units	This section shows you the main relationship among units. This section can help you to structure your programme and make best use of materials and resources.
Employer involvement	This section gives you information on the units that can be used to give learners involvement with employers. It will help you to identify the kind of involvement that is likely to be successful.

External units

Section	Explanation
Unit number	The number is in a sequence in the sector. Numbers may not be sequential for an individual qualification.
Unit title	This is the formal title that we always use and it appears on certificates.
Level	All units are at Level 3 on the national framework.
Unit type	This shows if the unit is internal or external only. See structure information in *Section 2* for full details.
GLH	Units may have a GLH value of 120, 90 or 60 GLH. This indicates the numbers of hours of teaching, directed activity and assessment expected. It also shows the weighting of the unit in the final qualification grade.
Unit in brief	A brief formal statement on the content of the unit.
Unit introduction	This is designed with learners in mind. It indicates why the unit is important, how learning is structured, and how learning might be applied when progressing to employment or higher education.
Summary of assessment	This sets out the type of external assessment used and the way in which it is used to assess achievement.
Assessment outcomes	These show the hierarchy of knowledge, understanding, skills and behaviours that are assessed. Includes information on how this hierarchy relates to command terms in sample assessment materials (SAMs).
Essential content	For external units all the content is obligatory, the depth of content is indicated in the assessment outcomes and sample assessment materials (SAMs). The content will be sampled through the external assessment over time, using the variety of questions or tasks shown.
Grade descriptors	We use grading descriptors when making judgements on grade boundaries. You can use them to understand what we expect to see from learners at particular grades.
Key terms typically used in assessment	These definitions will help you analyse requirements and prepare learners for assessment.
Resources	Any specific resources that you need to be able to teach and assess are listed in this section. For information on support resources see *Section 10*.
Links to other units	This section shows the main relationship among units. This section can help you to structure your programme and make best use of materials and resources.
Employer involvement	This section gives you information on the units that can be used to give learners involvement with employers. It will help you to identify the kind of involvement that is likely to be successful.

Index of units

This section contains all the units developed for this qualification. Please refer to *pages 6−7* to check which units are available in all qualifications in the creative digital media production sector.

Unit 3: Digital Media Skills

Level: **3**

Unit type: **External**

Guided learning hours: **120**

Unit in brief

Learners look at the creative digital media technical skills required to produce a product to a prescribed brief.

Unit introduction

This unit allows you to demonstrate, through constructing a digital media product, the skills you have developed in media production across other units.

You will learn how to work to a client brief relating to a specific media sector and its associated digital skills. You will choose the format and medium for your digital media project and demonstrate your creative and technical skills in the production of a complete product. You will demonstrate your understanding of production and post-production activities by working on the skills required to produce the product, and prepare appropriate documentation to support them. To complete the assessment tasks within this unit, you will need to draw on your learning from across your programme.

Working independently and using media hardware and software will prepare you for further skills development, both in employment and higher education.

Summary of assessment

This unit is assessed through a task set and marked by Pearson. Final outcomes will be completed in a 20 hour supervised assessment period.

Learners are provided with a brief 8 weeks before the supervised assessment period.

All final outcomes will be submitted electronically in file types specified by Pearson.

Please see *Issue 3* of the Sample Assessment Material to help prepare learners for assessment.

The number of marks for both versions of the task is 60.

The assessment availability is May/June each year.

Assessment outcomes

AO1 Apply knowledge and understanding of media production processes and skills when responding to a brief

AO2 Demonstrate application of knowledge and understanding to source appropriate assets in responses to a brief

AO3 Demonstrate selection and use of appropriate skills required for asset management

AO4 Demonstrate application of appropriate technical skills in the creation of a media product

AO5 Synthesise ideas in order to produce creative responses that meet the needs of the brief

Essential content

The essential content is set out under content areas. Learners must cover all specified content relating to their sector before the assessment.

A Source and create assets

Learners will source and create a range of assets for the creation/build of a digital media product in a specific media sector. This could include footage, recordings, digital images, text and files.

A1 Understanding the brief

- Read and understand a brief:
  - purpose of the brief
  - intentions of the client
  - timings of the brief
  - length of the finished digital media product
  - time constraints of the brief.
- Identifying an appropriate format for the digital media product:
  - skills required to complete the brief
  - availability of resources to complete the brief.
- Identifying the target audience for the digital media product
  - age of the target audience
  - relationship of demographic and media platform.
- Ideas generation:
  - mind mapping, mood boards, decisions and revisions to select final idea.

A2 Identifying assets and required material

Learners will source and create assets appropriate for the brief and their response to it.

- Assets required to fulfil a brief.
- How assets are to be created.
- How assets are to be sourced (searches, research enquiries).
- Where assets may be sourced (royalty free sources, picture libraries, open source, creative commons licenses, public domain).
- Considerations for each asset (copyright, royalties, clearances, permissions, acknowledgements).

A3 Creating assets and materials

Create own assets as per chosen medium.

- Video:
  - filming on location
  - filming in a studio/interior
  - lighting:
    - natural light
    - artificial light
    - portable flash
    - studio flash, filters, flags, reflectors
  - composition:
    - rule of thirds
    - crossing the line, 180 degree rule
  - mise-en-scène (costume, setting, figure expression)
  - sequences, scenes, takes
  - camera 'set-ups' within a scene (repositioning the camera within a scene)
  - shooting for continuity (eyeline matches, shot-reverse-shot, match on action)

- o shooting cutaways
  - o camera framing:
    - – wide, close up, medium close up, long, point of view, over the shoulder, two shot
  - o camera angles (low, high, neutral)
  - o camera height
  - o camera movements
    - – tracking, panning, craning, whip pan, dolly, tilt, handheld
    - – pull focus, zoom.
- Audio:
  - o recording sound:
    - – location sound, atmosphere, wild track, buzz track, wireless, interviews
    - – clarity, levels
  - o recording in a studio:
    - – multi-track, single microphone set up, multi microphone set up
  - o recording on location:
    - – acoustics
    - – background noise
  - o ambient sound:
    - – atmosphere, wild track, ambient music
  - o acoustics:
    - – large room, small room, auditorium, outside
  - o handling and extraneous noise
  - o microphone types:
    - – boom, wireless (radio), hand-held, lapel
  - o microphone techniques:
    - – placement
    - – isolation
  - o recording interviews:
    - – two person, multi person
  - o recording dialogue and effects
  - o monitoring recording levels.
- Digital publishing:
  - o writing and editing text for digital publications:
    - – for readability, accessibility, proofreading.
  - o creating graphics
    - – vector graphics
    - – bitmap graphics.
  - o taking photographs
    - – composition
    - – angle
    - – depth of field
    - – lighting.
  - o image editing
    - – image resolution
    - – cropping and resizing
    - – adjusting brightness and contrast, colour balance, hue and saturation, transparency
    - – removing and adapting backgrounds
    - – combining multiple images
    - – image transformations
    - – adding filters, styles and effects
    - – blending modes
    - – adding text and styling text
    - – image optimisation.

- editing audio and video assets:
  - arranging clips on a timeline, trimming, cutting, moving clips
  - adding transitions
  - adjusting audio levels
  - adding effects
  - adding titles and graphics
  - compressing and exporting in appropriate file formats.
- Web:
  - writing and editing text for web pages:
    - for readability, accessibility, proofreading
  - creating graphics:
    - vector graphics
    - scalable vector graphics (SVG)
    - bitmap graphics
  - CSS animation:
    - CSS transitions and transforms
  - taking photographs
    - composition, angle, depth of field
    - lighting.
  - image editing
    - image resolution
    - cropping and resizing
    - adjusting brightness and contrast, colour balance, hue and saturation, transparency
    - removing and adapting backgrounds
    - combining multiple images
    - image transformations
    - adding filters, styles and effects
    - blending modes
    - adding text and styling text
    - image optimisation.
  - editing audio and video assets:
    - arranging clips on a timeline, trimming, cutting, moving clips
    - adding transitions
    - adjusting audio levels
    - adding effects
    - adding titles and graphics
    - compressing and exporting in multiple file formats.
- Games:
  - 2D or 3D games
  - developing narrative and non-narrative games:
    - narrative games: role-playing games (RPG), strategy, adventure, sport, action, simulation
    - quiz, puzzle, platform games
  - developing and creating assets for 2D games:
    - character sprites
    - graphics for objects
    - background tiles
    - sprites for the environment.
  - developing and creating assets for 3D games:
    - 3D character models
    - 3D assets
    - interactive objects
    - textures for 3D assets and environments.

  o editing assets:
    – animating sprites
    – from the game engine
  o creating sound:
    – music
    – ambient sounds
    – sound effects.

A4 Index of sources

- Digital index format:
  o e-folders with links
  o blog with links or embedded assets
  o annotations
  o sourced materials: copyright, acknowledgements, references, ownership, permissions, clearances.
- Identification of the location of sourced assets.
- Identification of the appropriateness of the materials for the intended product (brief, length, size, content).
- Where in product materials will be used.

A5 Storing assets

- Assets labelled and logged with appropriate file names.
- Assets stored securely.
- Assets able to be retrieved:
  o on demand
  o in the correct file size and type
  o in the correct format.

B Preparing editing and/or manipulating assets

B1 E-portfolio

- E-portfolio (digital folders of prepared/edited/manipulation of created and sourced material).
- How original indexed material has been modified.
- Comparisons with original and fully prepared material ('before and after').
- Digital portfolio of process with annotations and justifications.

B2 Editing material/assets

- Editing to ensure**:**
  o material is prepared for construction/build
  o material is the required length
  o material is the required size
  o material is fit for purpose
    – for the client/brief
    – for the audience
  o the asset has aesthetic qualities that meet the needs of the commission brief
  o appropriate for the chosen medium.
- Video:
  o labelling and logging prepared material
  o removing unwanted material and outtakes
  o combining images
  o syncing sound:
    – lip sync
    – cut to music, beat
    – sound bridges

- o editing style:
  - – continuity editing - match on action, eyeline match, cutaway, shot-reverse-shot, split-screen, cross-cutting (parallel editing)
  - – non-continuity editing - montage, flashbacks.
- o adjusting audio (for time, length, quality) o resolving colour balance or grading issues
- o adding and modifying titles, captions, graphics and credits
- o adding cuts and transitions: standard cut, jump cut, cross dissolve, wipe, fade-in/out, J and L cut, smash cut, invisible cut
- o making selections through masking
- o adding effects: motion, opacity, speed, colour correction, audio, blur, superimposition.
- o editing footage shot with a green/blue screen.
- Audio:
  - o labelling and logging prepared material
  - o removing unwanted recorded material (outtakes, pauses, extraneous noise)
  - o noise reduction and restoration techniques
  - o combining tracks: cut, copy, paste, trim, join, fade
  - o invert, reverse, silence audio
  - o mixing and balancing:
    - – adjusting sound levels
    - – mixed multi tracks
  - o resolving sound levels and quality: adjusting audio levels, pan positions, fade in/out points
  - o equalization (EQ)
  - o effects: filters, delay, reverbs, chorus, distortion, pitch transposers, compression.
  - o editing sound effects.
- Digital print:
  - o labelling and logging prepared material
  - o creating a consistent page layout:
    - – fixed, reflowable
    - – page size and orientation
    - – columns and gutters
    - – margins
    - – baseline grid
    - – master pages.
  - o editing text:
    - – font, weight, style, leading, tracking, kerning, word spacing
    - – linking columns of text
    - – text wrap
    - – adding text to a line/path
    - – hyphenation and justification
    - – creating and formatting tables of data/information.
    - – redrafting, editing for length (word count), design space and emphasis
    - – accessibility, readability.
  - o editing images:
    - – insert, resize, crop
    - – changing shape
    - – adding styles and effects
  - o adding page layout elements:
    - – headlines, subheads, byline, running head, captions, folio, pull quote.

- o combining material:
  - – aligning text, images, graphics and interactive features
  - – use of white space
  - – creating a visual hierarchy.
- o animating assets:
  - – adding effects
  - – adjusting the order, duration and parameters
- o adding hyperlinks: internal and external
- o adding audio and video: poster frame, controller, playback options
- o adding image effects: image slideshows, image sequences, pinch and zoom, panorama
- o adding a scroll zone: horizontal and vertical
- o adding a page flip effect.
- Web:
  - o labelling and logging prepared material
  - o head element
    - – metadata
    - – character set
    - – document title
    - – links to external files.
  - o Writing and editing code
    - – HTML
    - – XHTML
    - – CSS
  - o web page layout techniques:
    - – fixed (static), liquid, adaptive and responsive layouts
    - – page size and resolution
    - – CSS floating elements
    - – CSS frameworks
    - – CSS flexible boxes
    - – Grid-based layouts.
  - o HTML text-based elements:
    - – heading, paragraph, citations and quotations, strong and emphasis
  - o adding images to web pages:
    - – sizing images
    - – positioning images
    - – figure and figure caption elements
    - – alternative text.
  - o representing information in a table
  - o creating lists:
    - – unordered, ordered, definition/description, nested
  - o creating links:
    - – navigation bars, dropdown menus, tabbed navigation
    - – image sprites and rollovers
    - – thumbnails
    - – internal and external hyperlinks
    - – email links
    - – opening links in a new browser window
    - – linking to parts of the same page
    - – image maps.
  - o creating forms and adding form validation

- CSS styling techniques:
  – box model
  – text
  – images, image hover overlays
  – links
  – lists
  – tables
  – forms.
- embedding audio and video:
  – audio and video attributes
  – adding controls.
- working with JavaScript to add interactivity:
  – image slideshow, image gallery
  – accordion
  – modal boxes, modal images
  – tabbed content
  – filter lists, filter elements
  – popups.
- Games:
  - labelling and logging prepared material
  - removing unwanted material: file size, poly/pixel counts
  - creating and editing the game environment
  - editing characters
  - creating interactive elements
  - combining characters and environments
  - lighting effects
  - editing audio:
    – effects
    – music
    – voice.
  - developing interactivity:
    – scripting animation
    – adding triggers and events
    – scripting movers
    – scripting buttons
    – creating movement
    – collision detection
    – pickups
    – scripting game mechanics
  - functionality:
    – designing rules: goals, rewards and challenges
    – user instructions
    – accessibility.

B3 Manipulations and modifications
- Changing the colour saturation of an image.
- Changing the background of an image.
- Changing text colour, style or size.
- Reducing or enlarging an image.
- Removing unwanted elements of the asset.
- Adding elements to the asset.
- Resizing an image or file.
- Rotating text and image.
- Editing.

B4 E-portfolio of preparation, editing and/or manipulation process

- E-portfolio format:
  - content page
  - folders (labelled and organised as per the chosen medium)
  - files (types and names)
  - accessibility
  - stored on hard drive, stored on the Cloud, stored on a VLE.
- Annotating the edit/manipulation process:
  - screen grabs, notes, slide shows, audio commentary
  - justifications for decisions and revisions.
- How the asset has changed and why:
  - comparisons (before and after)
  - screen grabs of process and technique
  - video/photos of the process technique
  - audio commentary.
- How this has affected the asset.

C Create/build a media product

C1 Meeting the brief

- The product is the required length.
- Standards are appropriate
  - as per medium chosen.
- The product is fit for purpose
  - for the client
  - for the audience.
- Aesthetic qualities that meet the needs of the commission brief.

C2 Digital skills

- Dependent on the chosen medium.
- Independent use of software.
- Independent use of hardware.
- Organised system to build/construct.
- Understanding of technical requirements.
- Creativity in meeting the brief.
- Clear communication of the message through technical skills.
- Production of a functioning digital media product to the brief.
- Accessibility.

C3 Saving final media product

- Check functionality.
- Check usability.
- Check accessibility.
- Labelling.
- File type.

Grade descriptors

To achieve a grade a learner is expected to demonstrate these attributes across the essential content of the unit. The principle of best fit will apply in awarding grades.

Level 3 Pass

Learners will be able to understand the set brief and be able to consider the assets required to produce a media product. They will be able to produce or source some appropriate assets and prepare an index to demonstrate this. They will be able to demonstrate some skills in editing, manipulating or preparing assets and be able to provide evidence of these processes in an e-portfolio. Learners will be able to produce a media product that meets some of the requirements of the brief.

Level 3 Distinction

Learners will be able to fully understand the set brief and be able to source and create the assets required to produce a media product. They will be able to source or produce a range of appropriate assets and prepare an in-depth index to demonstrate this. They will be able to demonstrate accomplished skills in editing, manipulating or preparing assets and be able to comprehensively provide evidence of these processes in an e-portfolio. Learners will be able to produce a media product that fully meets the requirements of the brief.

Key terms typically used in assessment

The following table shows the key terms that will be used consistently by Pearson in our assessments to ensure students are rewarded for demonstrating the necessary skills.

Please note: the list below will not necessarily be used in every paper/session and is provided for guidance only.

Command or term	Definition
Adequate	Learners provide sufficient information to ensure their understanding and knowledge.
Clear	The evidence is presented in an unambiguous manner that demonstrates learners' understanding, knowledge or skill.
Competent	Learners are able to work in order to complete tasks.
Comprehensive	The evidence is presented in a manner that demonstrates learners' thorough and consistent understanding, knowledge or skill.
Construct/build	Use edited/manipulated assets/materials to make a finished digital media product.
Create	Make assets or materials for a digital media product.
Detailed	Learners provide evidence that demonstrates the use of a wide range of information or techniques.
Effective	Learners are successful in producing an intended result.
Identification	Being able to describe briefly.
Limited	Elements are minimal and not fully developed.

Links to other units

The assessment for this unit should draw on knowledge, understanding and skills developed from:
- Unit 1: Media Representations
- Unit 4: Pre Production Portfolio
- Unit 6: Media Campaigns
- Unit 8: Responding to a Commission.

This unit would relate to the teaching of:
- Unit 2: Working in the Creative Media Industry
- Unit 5: Specialist Subject Investigation.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities. There is no specific guidance related to this unit.

Unit 9: App Production

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners will develop the skills to build apps and will gain an understanding of the tools, principles and practices that underpin modern app development.

Unit introduction

Have you ever stopped to wonder what makes a good app? In this unit, you will have to consider what kinds of app are available, together with the different platforms and devices for running apps. You will develop an understanding of the advantages and disadvantages of native, web and hybrid application environments and learn how to use development frameworks to build apps.

Building an app involves careful planning, design, development and testing and this unit will enable you to engage in the app production process in order to produce an app for a specific purpose and audience.

The growth in the popularity of apps over recent years means that designing, developing and debugging apps is a significant aspect of the evolution of web technologies. The combination of design, coding and creative software skills is particularly attractive to employers who want to hire media practitioners who have been exposed to new and emerging innovations in digital media technologies, and who are able to adapt their skills, knowledge and understanding to produce apps across a range of emerging platforms and devices.

Learning aims

In this unit you will:

A Understand apps and application environments

B Explore app development frameworks

C Produce an app for a specific audience and purpose.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand apps and application environments	**A1** Conventions of apps **A2** Characteristics of native app development **A3** Characteristics of web app development **A4** Characteristics of hybrid app development	A technology blog comparing how different apps adapt typical features for a specific audience and purpose and evaluating the effectiveness of native, web and hybrid application environments. The evidence can be presented in any suitable format, e.g. narrated screen recordings, annotated illustrations, written analysis, audio/video recordings.
B Explore app development frameworks	**B1** Using development frameworks to build apps **B2** Understanding relevant programming languages	A record of the process of experimenting with different development frameworks and writing, editing and adapting at least two different programming languages, e.g. annotated screen shots, screen recordings or production logs/blogs of how frameworks were used and programming languages adapted.
C Produce an app for a specific audience and purpose	**C1** Planning the app **C2** Developing the app **C3** Debugging and testing	An app produced for a specific audience and purpose. A record of the development of the app, e.g. annotated screen shots, screen recordings, audio/video recordings, a production log/blog. Evidence of debugging and testing the app.

Content

Learning aim A: Understand apps and application environments

A1 Conventions of apps

- Types of app – entertainment, education, games, health and fitness, navigation, news and information, lifestyle, business and finance, productivity and social networking.
- Features of apps:
  - o audience and purpose
  - o user requirements
  - o interface elements – voice search, auto fill-in, scanning; one-touch check-out, optimised for location-based searches
  - o platforms, devices and compatibility.

A2 Characteristics of native app development

Use the native programming languages of particular devices to build apps:

- developed using integrated development environments (IDE)
- built using native programming languages
- tools and widgets to create interfaces
- native tools for interactivity and user experience – multi-touch, graphics APIs, fluid animation
- built-in accessibility tools
- built-in component integration – camera, address book, calendar, geolocation
- app store distribution
- secure file storage
- consistent with the look and feel of the platform
- ability to run offline ensures peak performance at all times
- only available on the native platform
- separate versions required to run across multiple devices – time and cost implications in developing, testing and distributing the same app across different platforms.

A3 Characteristics of web app development

Use web technologies to build apps that are accessed through the web browser on the device:

- built using web technologies – HTML, CSS and JavaScript
- sophisticated programming languages
- cross-platform apps available on multiple devices
- downloaded from a central web server each time it is run
- access via a URL delivers the most up-to-date application to the device
- standardised web browsers make it easier to create a universal web app
- hindered by the limited capabilities of mobile browsers
- some lack of functionality across different platforms
- difficult to access the on-board hardware and software on a device, e.g. on-device email and contacts
- requires an internet connection to function, although HTML5 makes web app content available in offline mode
- harder to test and debug.

A4 Characteristics of hybrid app development

Use web technologies to build apps that are embedded within a native container:

- reduction in development time and cost
- looks and behaves like a native app
- no need to rewrite the entire app for each platform – HTML, CSS and JavaScript can be reused across different platforms.

Learning aim B: Explore app development frameworks

B1 Using development frameworks to build apps

- Coding guidelines – rules and standards used in programming a web application project:
  - o coding logic
  - o folder structure and names
  - o file names
  - o file organisation
  - o formatting and indentation
  - o statements, classes and functions
  - o writing clear comments
  - o documentation.
- Tools – IDE extended through a Software Development Kit (SDK):
  - o iOS – view controllers, navigation controllers, using storyboards, connecting user interface objects to the code
  - o Android™ – designing activities, view objects (UI widgets), view group objects.
- Libraries:
  - o common functions, classes and subroutines
  - o add and edit functionalities to a frameworked app.

B2 Understanding relevant programming languages

- Basic syntax – logic operations, defining arrays, conditionals and loops, enumerations, nested types.
- Data types – primitives, integers, floats, Booleans, tuples, working with strings, constants and variables, literals, type aliases, optionals.
- Functions – defining a function, returning single and multiple values, parameters, closures.
- Properties – stored properties, computed properties, observers.
- Classes and structures – value and reference types, defining structures, assigning structure instances, defining classes, class inheritance, initialisers and de-initialisers, creating subclasses, chaining.
- Working with objects.
- Statements and loops (while, if…else, for).
- Methods – defining instance and type methods, method naming, subscripts.
- Models, views and controllers.
- Protocols and extensions.
- Transitions and transformations.
- Media queries.
- Types, creating and accessing arrays, creating functions, calling functions, functions and scope, creating and accessing objects.

Learning aim C: Produce an app for a specific audience and purpose

C1 Planning the app

- Defining the purpose and audience for the app.
- Functionality.
- Summarising features and listing user behaviours.
- Technical specification:
  - o platform selection
  - o development environment(s)
  - o structure of the app
  - o number of screens and navigation.

- Designing a layout:
  - interface design – user's interactions, interface and required elements
  - sketches or style boards – colour, typography, icons, other visual elements
  - wireframing
  - prototypes.

C2 Developing the app

- Creating a new project.
- Use a simulator or emulator to run the app on different screen sizes and devices.
- Preparing assets – gather, generate, edit and optimise assets.
- Importing assets into the app development environment.
- Building and refining the app.
- Writing and editing the code.

C3 Debugging and testing

- Bug testing.
- Multiple browser compatibility.
- Application security.
- Performance.
- Usability.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand apps and application environments		**A.D1** Evaluate the effectiveness of how native, web and hybrid app development environments have been used to adapt typical features to meet their purpose and appeal to their intended audience.
A.P1 Explain how apps adapt typical features for a specific audience and purpose. **A.P2** Compare the strengths and weaknesses of native, web and hybrid app development environments.	**A.M1** Analyse how different types of app adapt typical features for a specific audience and purpose, through detailed examples. **A.M2** Analyse the effectiveness of native, web and hybrid app development environments.	
Learning aim B: Explore app development frameworks		**B.D2** Use a combination of coding techniques in different programming languages and with features of different frameworks to develop user interface elements for fully justified apps.
B.P3 Use a development framework to develop app user interface elements. **B.P4** Write and edit code to run and test app functionality in a programming language.	**B.M3** Use native and hybrid development frameworks to develop different app user interface elements. **B.M4** Write and edit a range of code to run and test app functionality in more than one programming language.	
Learning aim C: Produce an app for a specific audience and purpose		**C.D3** Design, develop and test a functioning app with an imaginative user interface that targets the audience and serves its purpose in a creative way.
C.P5 Design an app with a structure that is appropriate for needs of audience and purpose. **C.P6** Develop a partly functioning app with a basic user interface appropriate for its audience and purpose.	**C.M5** Design an app with a structure and technical specification that is effective in meeting the needs of audience and purpose. **C.M6** Develop a functioning app with an effective user interface appropriate for audience and purpose.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.M2, A.D1)

Learning aim: B (B.P3, B.P4, B.M3, B.M4, B.D2)

Learning aim: C (C.P5, C.P6, C.M5, C.M6, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to app development environments.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will select different types of app and evaluate how effectively design and functionality are combined to serve a specific purpose and meet the user requirements. Learners will evaluate how effective native, web and hybrid app development environments are for building apps to work across different platforms and devices.

For merit standard, learners will select different types of app and analyse how they have been designed to serve a specific purpose and meet the user requirements. The analysis will draw on detailed examples of both native and web apps, and learners must analyse the effectiveness of design and functionality across different platforms and devices.

Learners will also analyse how effective native, web and hybrid app development environments are for building apps, using examples of apps that serve different purposes and users.

For pass standard, learners will include a clear explanation of the purpose and intended user for the chosen apps. Learners will explain how design and functionality are combined in the apps to serve a specific purpose and meet the user requirements, including an explanation of how the apps work across different platforms and devices.

Learners will explain that developers have to choose an app development environment to build an app and provide a comparison between the strengths and weaknesses of native, web and hybrid app development environments.

Learning aim B

For distinction standard, learners will demonstrate platform-specific development skills by developing user interface elements and assets and combining appropriate coding techniques in different programming languages, with the features of different development frameworks and environments, in order to design, run and test app functionality. Learners will provide evidence of their development work and will justify the tools, skills, techniques and approach they have adopted. They will evaluate the outcomes, including valid suggestions for improvement.

For merit standard, learners will use at least one native development framework, for example iOS or Android SDKs, and one framework based on web technologies, for example Apache Cordova for hybrid apps, to develop different user interface elements.

Learners will demonstrate how to write and edit code to design, run and test app functionality in more than one programming language, for example Java for Android and Blackberry, Swift for Apple iOS, HTML5 and JavaScript for Windows 8.

Learners will experiment with user interface elements for the app that they intend to build for a specific audience and purpose in learning aim C, or they will explore the development frameworks, environments, software development kits and libraries through a series of shorter test projects, designed to expose learners to different aspects of app development environments. Whichever approach is adopted, learners will provide appropriate evidence of their development work, including an explanation of what they were trying to achieve and how it was achieved, what they learned and what they need to learn to improve further.

For pass standard, learners will select a specific development framework or environment designed to build native, web or hybrid apps.

They will demonstrate understanding and skills in the relevant programming languages and appropriate code design skills to develop user interface elements and design, code and test app functionality in the chosen framework.

Learning aim C

For distinction standard, learners will demonstrate that they have designed, developed and tested an app that functions as intended on at least one device on the chosen platform. The app will benefit from a user-friendly and effective interface, which is the result of effective planning and development work. The user interface design will provide the user with an engaging experience and the app will serve its purpose in a creative and imaginative way.

For merit standard, learners will demonstrate that they have planned an effective structure for the app through a detailed technical specification and suitable design work. They will produce evidence of planning for an app that is appropriate for audience and purpose.

Learners will produce a functioning app that responds as intended to the user's interaction on a device, or device(s), on the chosen platform. The user interface will not only enable the app to serve its purpose but its design will be sufficiently imaginative to enhance the user experience.

For pass standard, learners will produce evidence that the app has been designed with a suitable structure to meet the specific purpose for the app, for example audience and purpose is defined and the planned features, user behaviours, number of screens and interface design are appropriate for that audience and purpose.

Learners will produce an app that partly responds to the user's interaction on a device on the chosen platform. The user interface may be basic but it is clear to the user how to use the app and the app itself, at least in part, serves its purpose.

Links to other units

This unit links to:
- Unit 3: Digital Media Skills
- Unit 4: Pre Production Portfolio.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:
- guest speakers
- opportunities to visit suitable exhibitions.

Unit 10: Film Production – Fiction

Level: **3**
Unit type: **Internal**
Guided learning hours: **60**

Unit in brief

This unit will focus on the process of producing a short narrative film or film extract that uses generic conventions.

Unit introduction

Film production is becoming increasingly accessible with advances in portable, high quality and relatively low-cost equipment and software. The requirements of telling a story through the medium of film or video, and the discipline required to communicate this to an audience, remain as necessary as ever.

In this unit, you will investigate how conventions of narrative storytelling are used by filmmakers, looking at formats and generic conventions. You will then prepare for a film production by creating and gathering the materials and preparing the cast and crew. You will need to bring together a range of elements to successfully produce your product: camera, lighting, acting, direction and sound during the production phase, and successfully use post-production techniques to deliver a final outcome.

The introduction of more widely available software and less expensive high-quality equipment, such as DSLR cameras with the ability to shoot Full High-definition (HD) footage, as well as video streaming services, such as YouTube®, have opened up film production to many more people. It is now easier than ever for people to make independent fiction films and deliver them to an audience online. Independent filmmaking is also a growing area in the creative industries and in higher education, with many institutions offering the opportunity to study the various aspects of film production at a higher level.

Learning aims

In this unit you will:

A Understand codes and conventions of fictional film production

B Produce material for a fictional film of a specified genre

C Apply post-production techniques to a fictional film utilising codes and conventions of a specified genre.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand codes and conventions of fictional film production	**A1** Narrative filmmaking – purposes, formats, narrative structures and visual storytelling **A2** Genre, audience and textual analysis	Analysis of a range of media texts and their use of narrative. Micro-analysis of visual storytelling for a specific genre. Analysis of formats and structural conventions.
B Produce material for a fictional film of a specified genre	**B1** Filming techniques **B2** Sourcing material for film production **B3** Production management	Image and sound footage. Camera sheets and sound sheets of logged material. Image and sound files collated into scenes and shots. Logged copyright free music and effects.
C Apply post-production techniques to a fictional film utilising codes and conventions of a specified genre	**C1** Post-production techniques **C2** Realisation of the production in relation to genre and conventions **C3** Music, sound effects and titles **C4** Final cut	Witness statement of post-production process. Final edited short genre film or film extract.

Content

Learning aim A: Understand codes and conventions of fictional film production

A1 Narrative filmmaking – purposes, formats, narrative structures and visual storytelling

- Formats and purposes:
  - short films for festivals, competitions, showcasing talent
  - feature length productions, entertainment, drama, political filmmaking
  - TV drama, issue-based narrative filmmaking
  - serial dramas, ongoing narrative development, recurring themes.
- Narrative structures:
  - cause and effect, motivation of protagonists, order of storytelling
  - narrative models and theory, e.g. disruption/struggle/resolution
  - characterisation, stereotypes, stock characters
  - open/closed, single strand/multi-strand structures, realist/anti-realist narrative.
- Visual storytelling:
  - *mise-en-scène* – establishing characters and settings through costume, setting, props, figure expression
  - camera – framing, angles, height and movement
  - lighting – side, overhead, under, use of shadows and colour.
- Sound:
  - diegetic and non-diegetic, use of music.

A2 Genre, audience and textual analysis

Fictional film productions are classified into genre, each with their own expectations of the audience.

- Genre and audience:
  - film genres, e.g. comedy, thriller, noir
  - generic characteristics
  - audience expectations
  - generic expectations and subversions; conventions.
- Textual analysis of media texts:
  - microanalysis of style: *mise-en-scène* , lighting, editing, audio camerawork
  - macroanalysis of genre, narrative, themes.

Learning aim B: Produce material for a fictional film of a specified genre

B1 Filmmaking techniques

- Camera techniques:
  - framing: shot types (close-up, long shot, medium shot, medium long shot, medium close-up)
  - movement: pan, track, tilt, zoom, hand-held
  - height
  - focus
  - angles.
- Filming process:
  - master shot – establishing shot; set-ups within scenes
  - clapperboard
  - camera sheets – logging; scenes; shots; takes.

B2 Sourcing material for film production
- Sourcing material for film production:
  - script
  - music
  - sound effects
  - library footage.
- Sound production techniques:
  - recording
  - sound files – storage and labelling
  - wild tracks
  - ambient sounds.
- Sound process:
  - sound sheets – logging scenes, shots, takes
  - logging wild tracks, effects and ambient sound.

B3 Production management

You will need to organise your film shoot in terms of cast, crew and equipment.
- Production paperwork:
  - production schedule: deadlines and shooting schedule
  - location recces, logistics and risk assessments.
- Logistics:
  - cast list and contact details
  - call sheets – personnel, equipment, timings
  - equipment and studio/location hire.
- Professional practice:
  - working with actors – organisation, professionalism, collaboration, problem solving.

Learning aim C: Apply post-production techniques to a fictional film utilising codes and conventions of a specified genre

C1 Post production techniques
- Editing (image):
  - specified running time
  - continuity
  - transitions to form narrative, e.g. cuts, fades, dissolves
  - pace.
- Editing (sound):
  - transitions to form narrative, e.g. cuts, bridges, fades
  - dialogue as generic convention
  - music as generic convention.

C2 Realisation of the product in relation to genre and conventions
- Generic conventions:
  - iconography – visual signifiers of genre
  - use of stylistic codes to support narrative
  - conforming to generic conventions
  - subversion of generic conventions
  - audio – diegetic and non-diegetic, relevant to genre, pace and mood.

C3 Music, sound effects and titles

Generic use of the following:

- titling conventions
- music
- sound effects.

C4 Final cut

- Exporting for playback – appropriate levels and files.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand codes and conventions of fictional film production		
A.P1 Explain the narrative codes and conventions of a fictional genre film. **A.P2** Explain the stylistic codes and conventions of a fictional genre film with reference to its target audience.	**A.M1** Compare the narrative and stylistic codes and conventions of fictional films of the same genre.	**A.D1** Analyse the narrative and stylistic codes and conventions of different film genres using detailed examples to illustrate points.
Learning aim B: Produce material for a fictional film of a specified genre		
B.P3 Produce appropriate moving image footage for use in the making of fiction film of a specific genre. **B.P4** Manage film production appropriately for a fiction film in a recognised genre.	**B.M2** Produce creative material for use in the making of a fiction film of a specific genre. **B.M3** Manage film production effectively and efficiently for a fiction film in a recognised genre.	**B.D2** Consistently demonstrate organised, professional working practices when producing material for fiction film production.
Learning aim C: Apply post-production techniques to a fictional film utilising codes and conventions of a specified genre		
C.P5 Use editing techniques competently to create a fiction film production that complies with the codes and conventions of a genre. **C.P6** Apply music and effects appropriately to a fiction film production within the codes and conventions of a genre.	**C.M4** Use editing techniques effectively to create a narrative in a fiction film production within the codes and conventions of a genre. **C.M5** Apply music and effects to enhance a fiction film with the codes and conventions of a genre.	**C.D3** Use post-production techniques confidently to create a final production that is creative within the codes and conventions of a genre.

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.P4, B.M2, B.M3, B.D2)

Learning aim: C (C.P5, C.P6, C.M4, C.M5, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- the internet to source pre-recorded sound effects and music
- film scripts and screenplays (professional examples)
- PC or MAC computers
- open source or proprietary editing and post-production software
- suitable portable camera (DSLR/video camera), equipment and mountings (tripods, dolly, track etc.)
- portable lighting kits
- external microphones (for recording while filming).

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will analyse the codes and conventions of fiction film production across a minimum of two extracts from two different genre feature films or two different entire short genre films. The analysis will include comment on narrative structure, such as how the two genres open or end and the stylistic codes that support the narrative and indicate the genres. There will be discussion on the differences between the genres and audience interpretation. For example, learners may indicate that the development of the horror genre has led to expectations of the audience being raised over time and so generic conventions may have to be subverted to catch the audience out. In the romantic genre, however, conventions are adhered to and are what the audience expects, such as happy ever after.

Learners will provide detail on the use of the techniques through a microanalysis of the extracts or films, discussing camera, use of dialogue, sound effects, background audio, lighting and editing. For example, they may write, 'The use of a 'floating camera' technique in this scene, where the operator uses a Steadicam® rather than tripod and the shot never quite settles, is disturbing for the audience and reinforces that all is not well in the scene. This reinforces the notion with the audience that they are watching a film in the horror genre.'

For merit standard, learners will make comparisons between two extracts or short films of the same genre and will comment on the similarity of the use of filmmaking techniques and the manner in which they communicate meaning to the audience. The work will be linked, for example learners may write, 'Both horror examples, though on the surface seem quite different, follow the same narrative pattern and contain the same techniques.' Learners will then illustrate the comparisons and may find one or two differences overall.

For pass standard, learners will produce two distinct pieces of work, one that explains film narrative and genres and one that analyses the use of techniques in a film scene from a recognisable, probably mainstream, genre (microanalysis). There will not be significant cohesion in linking codes with conventions. The first piece of work will explain the main characteristics of the genre (iconography) and the narrative techniques which make it typical, such as, 'The horror genre tends to use typical characters (the virgin hero or heroine as survivor, the monster/killer, the sinner who becomes the victim), and keeps the audience in suspense by revealing parts of the story little by little until the audience can piece it all together.' The second piece of work may comment on the stylistic codes in a simplistic way saying, for example, 'The dim lighting is to stop the audience feeling comfortable and the soundtrack is designed to shock the audience at times.' Overall the work will be superficial and descriptive.

Learning aim B

For this learning aim it is important that learners have the opportunity to manage the filming of an entire scene within the production, managing personnel as appropriate. Group projects are acceptable but the responsibility for scenes must be given to individuals. Narrative films do not necessarily contain actors though many do, for example a creative piece may be shot entirely in POV (point of view), but it must be sequential and show an understanding of continuity. Where actors are used there is no award for performance, rather it is the concept and construction of the sequence using film production techniques that is awarded.

For distinction standard, learners will demonstrate a professional and organised approach when working with others. This will be demonstrated through the management of the logistics of organising a fiction film production which may include booking the room and correct equipment, doing checks and managing their relationship with the talent and crew to achieve the correct result. Decisiveness, resourcefulness, punctuality and teamwork will be among the qualities deemed 'professional'. Learners' production folder and development work for this section of the unit will be organised and well presented.

For merit standard, learners will produce footage for use in a fiction film production which will consider the viewing position, varied angles and set-ups. The footage will not be dissimilar to what is expected by an audience watching other products from the genre. In a dialogue-based TV thriller, for example, learners will adopt the conventional shot, reverse-shot format for filming conversations between two actors. Footage will be correctly exposed and focussed. The production folder will be comprehensive, including notes on how learners have managed the production of the filming of a scene.

For pass standard, learners will produce material that is appropriate for an identified genre. The outcomes will not always be successful but the intention to produce appropriate material will e clear. Learners may film an establishing shot at the beginning of a scene but this may be poorly framed and over-exposed, disrupting the diegetic effect for the audience. Learners may only use the same angle and/or height for each shot, with little variation. Learners will attempt to manage the filming for a scene in their production. They will need to record their experience and outline how they organised their resources to obtain the footage.

Learning aim C

For distinction standard, learners will use post-production techniques to create a product which is distinct in its genre and which demonstrates a confident use of conventions, either typically or by subverting them. The finished product will use conventions of the identified genre and will be creative in its use of the individual codes (narrative, *mise-en-scène*, lighting, camerawork, editing) to support them. Learners will use a range of techniques to enhance their productions. Titles will also indicate generic conventions.

For merit standard, learners will use post-production techniques to produce a fiction film that is identifiable by its generic signifiers. Editing will be accurate in terms of continuity and appropriate timings. The finished product will include titles that conform to its intended genre. At this level, the work may have minor inconsistencies in the finished production but the piece will be mostly fit for purpose. Learners will add appropriate sound that is purposeful, appropriate to genre and enhances the final product.

For pass standard, learners will use basic post-production techniques to produce a fiction film that has an identifiable genre. Learners will add sound but it may not always be suitable for the genre or the purpose, such as creating tension, and it may not be well executed, the soundtrack may drown out dialogue etc. The final product will be simplistic in terms of techniques used but the genre will still be identifiable through these limited codes.

Links to other units

This unit links to:

- Unit 3: Digital Media Skills
- Unit 4: Pre Production Portfolio
- Unit 15: Advertising Production
- Unit 16: Factual Production
- Unit 18: Storyboarding for Digital Media
- Unit 20: Single Camera Techniques
- Unit 21: Film Editing.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:

- guest speakers
- opportunities to visit suitable exhibitions.

Unit 12:   Website Production

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners will be introduced to the fundamental technologies, principles and practices that underpin contemporary website production.

Unit introduction

Website production is a dynamic and constantly evolving environment. Creating a successful website involves designing imaginative web pages that combine engaging content, functionality and effective design to enhance the user's experience.

In this unit, you will be introduced to a web production life cycle that involves learning how to manipulate common codes and conventions to produce a website that meets a specific purpose and appeals to the intended user. Your web pages will require appropriate content, such as text, images and audio-visual content to engage the user, and you will learn how to prepare a variety of assets and position them on your web pages. The effectiveness of your website will be enhanced through the addition of interactivity and you must regularly test your website in order to ensure appropriate functionality, accessibility and user experience.

With more and more of the world's business being conducted online, there is a growing demand for students with the skills, knowledge and understanding required to design and develop contemporary websites. This unit will provide an excellent foundation if you wish to pursue a career in the web and digital media industry.

Learning aims

In this unit you will:

A Understand the codes and conventions of website production

B Prepare materials for website production

C Produce a website for a specific purpose and audience.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand the codes and conventions of website production	**A1** Audience and purpose **A2** Common components of a web page **A3** Accessibility features **A4** Interactive content	An interactive report, e.g. blog, e-portfolio or ebook, with comparative analysis of how different websites incorporate common codes and conventions, interactivity and accessibility for a specific purpose and audience.
B Prepare materials for website production	**B1** Sourcing assets **B2** Selecting assets **B3** Preparing assets for inclusion in a website	A log of assets from primary and secondary sources. A record of the process of preparing assets, e.g. annotated screenshots, screen recordings, or production logs of how text, images and audio-visual content was prepared.
C Produce a website for a specific purpose and audience	**C1** Structure and organisation **C2** Creating a page layout **C3** Inserting and positioning assets **C4** Navigation **C5** Interactivity **C6** Testing in different web browsers	A website produced for a specific purpose and audience. A record of the development of the website, e.g. annotated screenshots, screen recordings, audio/video recordings, and production log. A test log to assess the functionality, accessibility and usability of the website.

Content

Learning aim A: Understand the codes and conventions of website production

A1 Audience and purpose

- Websites are designed to serve a specific purpose:
  - education
  - information
  - entertainment
  - personal
  - e-commerce.
- The relationship between audience and purpose:
  - defining the target audience
  - understanding the requirements of the user
  - user experience and expectation
  - brand identity.
- The role of advertising in website production.

A2 Common components of a web page

- Header – to identify and visually unify all the pages in a site.
- Navigation – to move between pages.
- Body/content – to contain everything to be displayed inside the main browser window.
- Footer – to hold key information and a site map.
- Background – to complement the content of the page.

A3 Accessibility features

- High contrast colours.
- Scalable text.
- Appropriate alternative text.
- Use of assistive technology – screen readers, text-only browsers, screen magnifiers.
- Use of language.

A4 Interactive content

- Interactive features – search options, forms, shopping carts, image galleries.
- Dynamic content that updates automatically – integrating with social networks, maps.

Learning aim B: Prepare materials for website production

B1 Sourcing assets

- Creating graphics – vector shapes, bitmap images, buttons, icons.
- Primary sources – writing copy, taking photographs, recording multimedia content.
- Secondary sources:
  - libraries, stock sites, other people
  - copyright permissions
  - clearances – public domain, creative commons licences.

B2 Selecting assets

- Log all assets – name, size, file format, permissions.
- Select assets for a specific audience and purpose.

B3 Preparing assets for inclusion in a website

- Text:
  - headings and subheadings
  - link to related content
  - editing and proofreading.
- Images, graphics and illustrations:
  - image manipulation – simple image adjustments, filters, transparencies
  - re-sizing images – retaining proportions, cropping
  - setting image resolution
  - process of image optimisation
  - file formats – GIF, JPEG, PNG, SVG.
- Audio-visual material:
  - basic editing techniques – adding titles, transitions, cropping
  - compressing audio visual assets
  - file formats – MP4, MOV, ogg, AVI, MP3, WAV.

Learning aim C: Produce a website for a specific purpose and audience

C1 Structure and organisation

File management:

- root folder structure
- file name conventions.

C2 Creating a page layout

- Page size and resolution.
- Search Engine Optimisation (SEO) – metadata.
- Links to external files – CSS, JavaScript.
- Page layout:
  - page structure – templates, grids, frameworks, tables
  - compositional techniques
  - consistency between pages.

C3 Inserting and positioning assets

- Images – retaining proportions, alignment.
- Text – headings and paragraphs, emphasis, alignment, typography.
- Audio and moving image content.
- Audio and moving image content from a hosted service.
- Embedding audio and moving image content on the page – manipulating attributes.

C4 Navigation

- Links.
- Internal links between pages – navigation bar, dropdown menus, tabbed navigation, page anchors.
- Adding links to images and text.
- External hyperlinks to other websites.
- Email links.
- Absolute and relative URLs.
- Image sprites/rollovers.
- Using icons.
- Ease of use.
- Accessibility.

C5 Interactivity

- Forms and form validation.
- Filter, search and sort.
- Content panels, e.g. image slideshows, galleries, accordions.
- JavaScript libraries and frameworks.

C6 Testing in different web browsers

- Functionality.
- Page content displays as intended.
- Working links.
- Accessibility – use of high contrast colours, alt tags, scalable text.
- The World Wide Web Consortium (W3C®) code validation.
- User experience.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Understand the codes and conventions of website production		**A.D1**	Evaluate the effectiveness of how websites that have been designed for different purposes combine common codes, conventions nd interactive features to appeal to their intended audiences.
A.P1 Explain how websites use common codes and conventions for a specific audience and purpose. **A.P2** Compare the effectiveness of the interactive features of two websites that have the same purpose.	**A.M1** Analyse how websites use common codes and conventions for a specific audience and purpose, through detailed examples. **A.M2** Analyse the effectiveness of the interactive features within different websites.		
Learning aim B: Prepare materials for website production		**B.D2**	Justify final asset choice and preparation techniques applied in terms of purpose and audience.
B.P3 Identify assets that are appropriate for specific purpose and audience. **B.P4** Demonstrate asset preparation techniques appropriately to text and images.	**B.M3** Identify and log assets for a specific purpose for an appropriate audience. **B.M4** Demonstrate asset preparation techniques effectively to text, images and audio visual material.		
Learning aim C: Produce a website for a specific purpose and audience		**C.D3**	Produce a functional website with integrated creative content and layout appropriate for audience and purpose that enhances user experience.
C.P5 Develop structured web pages with content appropriate for audience and purpose. **C.P6** Create a functional website with a consistent page layout.	**C.M5** Develop effective structured web pages with interactive content appropriate for audience and purpose. **C.M6** Create a functional website with a coherent layout that provides an appropriate user experience for a specific audience and purpose.		

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.M2, A.D1)

Learning aim: B (B.P3, B.P4, B.M3, B.M4, B.D2)

Learning aim: C (C.P5, C.P6, C.M5, C.M6, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- image manipulation software
- web design software
- web browsers.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will select websites that serve different purposes and audiences. They will evaluate how effectively the sites adopt or reject common codes and conventions, including accessibility techniques and interactive features.

For merit standard, learners will select websites that serve different purposes and audiences, analysing how the page components have been designed to meet a particular purpose and appeal to a specific audience. Learners will analyse how these websites have been designed to be accessible to the widest possible audience.

Learners will also analyse how effective the interactive features are in different websites serving different purposes.

For pass standard, learners will include a clear explanation of the purpose and intended audience for different websites. Learners will explain how the page components of different web pages have been designed to serve a specific purpose and appeal to a specific audience, including an explanation of how the web pages have been designed to be accessible to the widest possible audience.

Learners will select web pages with suitable interaction to enable them to compare the effectiveness of different interactive features, such as audio playlists, social networking feeds and shopping carts, in two different websites that serve the same purpose.

Learning aim B

For distinction standard, learners will source and prepare assets to be included in a website for a specific purpose and audience (which learners will produce in learning aim C). The sourced text, images and audio visual assets will be appropriate for the specified audience and purpose and will be prepared using appropriate techniques; both the choice of assets and chosen preparation techniques must be justified in relation to audience and purpose.

Learners must apply preparation techniques appropriately to text, images and audio visual material. Audio visual material will be compressed for inclusion in a web page; the file formats selected will be fit for purpose.

For merit standard, learners will source and prepare assets to be included in a website for a specific purpose and audience (which learners will produce in learning aim C). The material that learners source can be from primary and/or secondary sources but it will be appropriate for the specified audience and purpose and be logged appropriately, including an explanation of the clearances required for any material from secondary sources.

For pass standard, learners will source and prepare assets to be included in a website for a specific purpose and audience (which learners will produce in learning aim C). Learners may gather material from primary and/or secondary sources but the material must be appropriate for the specified audience and purpose. They must apply preparation techniques appropriately to their chosen text and images. Text must be prepared to fulfil its purpose, for example relevant, concise and separated into sections with suitable headings and subheadings. Learners must also resize images in proportion, optimise images and select file formats that are fit for purpose.

Learning aim C

For distinction standard, learners will produce a working website that integrates creative multimedia for the specified audience and purpose. The website will have a consistent layout that enhances the experience for the user, for example complex page structure with appropriate use of compositional techniques, layout and design.

Learners will also produce a site that functions as intended, for example internal and external hyperlinks, all content displayed as intended with appropriate accessibility features.

For merit standard, learners will produce structured web pages with interactive content appropriate for audience and purpose, for example image galleries, video player, contact form, clock. All of the pages in the site must have a coherent layout that enhances the user experience for a specific audience and purpose, for example the combination of text and images, creation of a visual hierarchy, use of white space and use of high contrast colours.

Learners will also produce a site that functions as intended, for example adding form validation to a web form or controls to video or audio assets.

For pass standard, learners will produce structured web pages, for example web pages set to an appropriate size and resolution, external files linked appropriately and the page structured to hold text and images, all appropriate for audience and purpose. All of the pages within the site must have a consistent layout, for example header, navigation, structure of the page and house style.

Links to other units

This unit links to:
- Unit 3: Digital Media Skills
- Unit 4: Pre Production Portfolio
- Unit 31: Coding for Web Based Media.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of guest speakers.

Unit 13:   Digital Games Production

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners will understand game genres and the principles of game design. Learners will design and make a digital game.

Unit introduction

Good design is at the heart of all successful games. Good gameplay design is what makes us want to play, along with good coding and good graphics that make the vision a reality and make it look appealing.

You will learn about the main features of different types of games and the key elements you need to think about when designing them. You will decide what type of game you want to make and gather the graphics, sounds and other assets to make it. You will create a level design for your game and create it in a game engine, focusing on how your game is designed rather than the graphics or coding.

This unit will give you some of the key skills needed to be a game designer, these skills will also be helpful in a number of other roles. The work you produce can form part of your portfolio for progression to employment or higher education.

Learning aims

In this unit you will:

A Understand game genres and design considerations

B Design a digital game using sourced assets

C Produce and check a digital game in a specific genre.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand game genres and design considerations	**A1** Core game genres **A2** Gameplay design	Guide for an industry website.
B Design a digital game using sourced assets	**B1** Level design **B2** Source and prepare assets	Annotated level design with supporting detail. All assets to be used in the game with a log of sources, permissions and justification, written or spoken, of decisions made.
C Produce and check a digital game in a specific genre	**C1** Build a digital game **C2** Check the digital game	Digital game in the authoring software. Written or recorded documentation of the checking of the game.

Content

Learning aim A: Understand game genres and design considerations

A1 Core game genres

- Genres of video games.
- Graphical theme in video games.
- Game genre features.
- Role-playing game (RPG):
  - selection and development of character skills, attributes and abilities
  - item selection and inventory management
  - quest/mission choices
  - experience points and levelling up.
- Strategy:
  - harvesting resources
  - selecting units to build
  - strategic and tactical deployment of units
  - adversarial context with objective of defeating real or artificial intelligence opponent
  - real time or turn-based.
- Sports:
  - competition against real or artificial intelligence opponent
  - performance challenges
  - based on a real or fantasy competitive sport.
- Adventure:
  - exploration of the game world
  - narrative driven
  - puzzle elements
  - item selection and inventory management.
- Action:
  - requires quick reflexes
  - requires accurate hand-eye coordination
  - requires accurate timing.
- Simulation:
  - simulation of specific real activity, e.g. flying planes
  - ranges from attempted realism to simple entertainment
  - development of entities, e.g. cities, animals
  - management of entities and resources.
- Puzzle:
  - problem solving as primary activity
  - physics-based puzzles
  - logic-based puzzles
  - matching puzzles
  - shape manipulation puzzles
  - word-based puzzles.
- Hybrid games:
  - combination of two or more genres, e.g. action adventure.

A2 Gameplay design

- Key elements of gameplay design:
  o core gameplay mechanics, e.g. jump height
  o goals, challenges and rewards
  o progression
  o balance and flow
  o fair and unfair player punishment
  o secrets and Easter eggs
  o replay value
  o target audience, key demographics.
- Designing for emergent gameplay:
  o encouraging unforeseen solutions through gameplay content
  o non-linear gameplay
  o sandbox modes.

Learning aim B: Design a digital game using sourced assets

B1 Level design

- Selection of genre, purpose and audience.
- Core gameplay mechanics.
- Placement of gameplay elements.
- User interface.
- Scale plans.
- Design of goals, challenges and rewards to fit with chosen genre and audience.
- Design progression to fit with chosen genre and audience, e.g. progressive difficulty.

B2 Source and prepare assets

- Sourcing assets:
  o primary: self-created
  o secondary: library assets, online
  o log of assets
  o copyright holder
  o permissions.
- Selection of assets:
  o suitability for audience and purpose
  o graphics
  o animation
  o sound
  o font
  o other, e.g. particle systems.
- Factors affecting asset choices:
  o file type
  o file size
  o size of graphics
  o aesthetics
  o availability, e.g. copyright.
- File management:
  o file formats
  o folder structure
  o file name conventions.

- Modification of assets:
  - resolution
  - size
  - file type.

Learning aim C: Produce and check a digital game in a specific genre

C1 Build a digital game

- Assets:
  - importing into engine
  - import settings, e.g. compression
  - naming conventions.
- Initial set-up, e.g. room size.
- Set-up graphics, e.g. texturing.
- Set-up animation.
- Layout to fit with chosen genre.
- Construction of goals, challenges and rewards to fit with chosen genre and audience.
- Construction of difficulty and progression to fit with chosen genre and audience.

C2 Check the digital game

- Functionality.
- Rules: goals, challenges and rewards.
- Progression.
- Balance and flow.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Understand game genres and design considerations		A.D1	Evaluate examples of different game genres and their gameplay design in relation to their target audience.
A.P1 Explain the features of core game genres. **A.P2** Explain features of gameplay design.	**A.M1** Analyse different game genres and their gameplay design.		
Learning aim B: Design a digital game using sourced assets		**B.D2**	Develop a comprehensive level design for a digital game with justification of the assets chosen.
B.P3 Source assets for a digital game that are appropriate for the genre and design. **B.P4** Develop a level design for a digital game, appropriate for audience and genre.	**B.M2** Source and accurately log assets and permissions for a digital game. **B.M3** Develop a detailed level design for a digital game, appropriate for audience and genre.		
Learning aim C: Produce and check a digital game in a specific genre		**C.D3**	Create a digital game in a specific genre, justifying the level of challenge for the target audience.
C.P5 Create a digital game that demonstrates the features of the chosen genre. **C.P6** Explain how the functionality of the digital game has been checked.	**C.M4** Create a digital game in which the genre features have been effectively used to target the audience. **C.M5** Assess the strengths and weaknesses of the finished digital game.		

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.P4, B.M2, B.M3, B.D2)

Learning aim: C (C.P5, C.P6, C.M4, C.M5, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- an appropriate game engine
- software to allow for any necessary modification of assets, which may include graphics software, 3D-modelling software and sound-editing software.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will evaluate examples of the different genres, showing how their gameplay is targeted at the audience. Evaluation means that learners will consider the strengths and weaknesses of the individual games and come to a reasoned conclusion of their overall efficacy. Learners will consider more than one example from each genre and compare them when reaching their conclusion. Each example will consider several elements of gameplay design. All elements of gameplay design and emergent gameplay will be evaluated in the work as a whole.

For merit standard, learners will analyse examples of the different genres and their gameplay. Learners will explain how the genres have been implemented in the different examples and will generally look at a single typical example from each genre. Each example will consider several elements of gameplay design. All elements of gameplay design and emergent gameplay will be analysed in the work as a whole.

For pass standard, learners will explain how game genre is defined by gameplay mechanics as well as what makes a game fit each genre. Their explanation will be without examples, or with general or brief examples that do not consider the details of individual games. Hybridity may be poorly understood or absent. Learners will, however, demonstrate their understanding of the seven listed genres to be considered for a pass. When explaining gameplay, learners will explain emergent gameplay and at least five of the key elements of design but there will be no or brief examples. Gameplay will be loosely related to genre or may be dealt with as a separate topic.

Learning aim B

For distinction standard, learners will create a comprehensive level design for a digital game. The plan will be precisely to scale with comprehensive information about interface and gameplay. Where features are already defined by the engine and game type, learners will still be aware of what they are and how they might exploit them. Where the gameplay mechanic is relatively simple, as in some puzzle games, for example, then the comprehensive approach will be shown through the range and variety of levels. In other cases, it will be a single design, which will be comprehensive, for example a death match level will show scrupulous attention to scale and placement of pickups. Assets will be carefully chosen and logged with the same attention to permissions as merit work, but distinction work will also justify the decisions made in terms of the unit content and justify any decisions to modify assets.

For merit standard, learners will create a detailed level design for a digital game. The plan will be broadly to scale with detailed information about interface and gameplay. Where the gameplay mechanic is relatively simple as in some puzzle games, for example, then the design will be detailed with some variety of levels. In other cases it will be a single design, which will be detailed, for example a death match level will show some care in the use of scale and placement of pickups. Learners will source assets for their digital game and log the sources and permissions for each one. Particular care will be given to permissions so if, for example, an online asset is made available under the Creative Commons Attribution 3.0 licence, this will be made clear, along with the name that has to be cited in the game and the URL from which the asset was sourced. The assets themselves will be organised into a clear folder system with appropriate names.

For pass standard, learners will create a level design for a digital game. The minimum acceptable evidence for a pass is a plan of the game with information about user interface such as score and information about gameplay such as goals. The plan may not be to scale, and may not be detailed, but it will be clear what the player has to do and the design will be appropriate for the chosen genre. Learners will source assets for their digital game, which will be appropriate to the genre of the game and design.

Learning aim C

For distinction standard, learners will create a digital game that shows creativity in targeting the chosen audience. Learners will display some imagination, whatever genre and mechanic they have been working with, whether it is a creative approach to a simple platform mechanic or an inventive approach to quest design within an RPG framework. Learners will check their game and will analyse all aspects, reaching a conclusion about the game's overall effectiveness in relation to its target audience.

For merit standard, learners will create a digital game in which the genre features have been used effectively to target the chosen audience. It will be interesting to play and engaging for its target audience. Learners will check their game and will assess its strengths and weaknesses; they will consider its detail and not just its functionality.

For pass standard, learners will create a digital game that shows the features of the chosen genre. It may be formulaic and unimaginative but it will be appropriate. Learners will explain how they have checked the game for functionality and will not consider in any detail the strengths and weaknesses of what they have done.

Links to other units

This unit links to:
- Unit 3: Digital Media Skills
- Unit 18: Storyboarding for Digital Media
- Unit 34: Game Engine Scripting
- Unit 42: Games Testing.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities to do so. There is no specific guidance related to this unit.

Unit 14: Digital Magazine Production

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners will explore codes and conventions of different magazine genres and platforms. They will select and prepare content, and create layouts for a specific genre of magazine.

Unit introduction

Magazines are prepared and produced digitally across a wide range of genres. They often combine content from a diverse range of global contributors, and are increasingly available for both print and digital distribution platforms.

In this unit, you will learn about the codes and conventions that magazine producers use to communicate with their target audience, and how they generate, select and prepare materials to produce a completed magazine cover and double-page spread.

The skills you will develop in this unit can be applied to both print and digital magazines across a wide range of genres. The layouts you produce for this unit can form part of a portfolio of work for progression to employment or higher education.

Learning aims

In this unit you will:

A Understand the considerations, codes and conventions of a specific genre of magazine for print and digital platforms

B Develop materials for magazine production

C Produce magazine layouts in the codes and conventions of a genre.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand the considerations, codes and conventions of a specific genre of magazine for print and digital platforms	**A1** Magazine genres **A2** Codes and conventions **A3** Platform considerations	A report in the form of a blog or presentation of annotated examples, evaluating the impact of the codes and conventions of magazine design and layout for a specific genre of magazine in appealing to the target audience and fulfilling the magazine purpose across print and digital platforms.
B Develop materials for magazine production	**B1** Source, log and generate appropriate content **B2** Preparing content in appropriate formats	Pre-production materials for a magazine, including an analysis of the content and technical requirements for a specific genre and platform and an annotated log showing all creative and technical decisions relating to how all materials have been generated, selected and prepared.
C Produce magazine layouts in the codes and conventions of a genre	**C1** Magazine production stages **C2** Creating magazine layouts	Finished layouts for a magazine cover and double-page spread for a magazine of a specific genre, accompanied by a log of design and production stages. This may be presented in the form of a production log, blog or an annotated visual record; it must show experimentation with codes and conventions within trial layouts, and justification of final design and production decisions. It will include a review of the suitability of the product for a specific target audience.

Content

Learning aim A: Understand the considerations, codes and conventions of a specific genre of magazine for print and digital platforms

A1 Magazine genres

- Purposes of different magazine genres:
  - entertain
  - inform
  - promote
  - advertise associated products
  - appeal to target audience
  - gain market share.
- The relationship between purpose and target audiences of magazines within a specific genre.
  - Defining the demographics for magazines within a specific genre:
    - age
    - gender
    - psychographics
    - other demographic considerations.
  - Defining appropriate content to appeal to the target audience:
    - journalistic
    - lifestyle
    - celebrity 'gossip'
    - informative
    - interviews
    - editorials
    - humorous
    - reviews
    - competitions.

A2 Codes and conventions

- Codes and conventions of magazine covers:
  - masthead (title)
  - sell-lines/coverlines
  - strapline, tagline or slogan
  - price and bar code
  - cover model or celebrity photo.
- Codes and conventions of page layout:
  - headings
  - columns
  - composition, including grid structure, balance and use of white space
  - page numbering and folios
  - how design elements, including colour, typography and layout, are used to engage the target audience within a specific magazine genre
  - how content is combined to create meaning within a specific magazine genre.

A3 Platform considerations

- Cost considerations of print- and digital-based magazines.
- Distribution channels of print- and digital-based magazines.
- Opportunities and limitations of print- and digital-based magazines to address target audiences.
- Technical requirements for print- and digital-based magazines.

Learning aim B: Develop materials for magazine production

B1 Source, log and generate appropriate content

- Selection of content, including text, photography, illustration, graphics, video, audio and interactive elements, as appropriate.
- Generating primary content, including text, photography, illustration, graphics, video, audio and interactive elements, as appropriate.
- Source secondary text and visual materials with consideration of copyright and permissions for use.
- Aesthetic and technical qualities of visual content.
- Selecting appropriate content types for genre, audience and purpose:
  - journalistic
  - lifestyle
  - celebrity gossip
  - informative
  - interviews
  - editorials
  - humorous
  - reviews
  - competitions.

B2 Preparing content in appropriate formats

- Analysis of technical requirements of final product and the platforms on which it will be published.
- Preparation of text materials in a suitable format, including:
  - writing copy
  - selection and editing of copy
  - consideration of modes of address and appropriateness of language
  - checking and correcting (facts, accuracy, balance)
  - copy-editing for spelling, grammar and clarity.
- Preparation of visual materials in a suitable format for the intended platform, including:
  - importing
  - cropping, scaling, image correction
  - consideration of file format, file size, image quality.

Learning aim C: Produce magazine layouts in the codes and conventions of a genre

C1 Magazine production stages

- Ideas development and initial planning.
- Producing trial layouts.
- Reviewing and selecting final design.
- Producing final layouts.
- Reviewing final layouts prior to publishing:
  - readability
  - resolution
  - appropriateness to target audience
  - testing media rich content (digital platforms).
- Publishing product for specified platform:
  - publishing to digital platform
  - printing with trim marks (print platform).

C2 Creating magazine layouts

- Differing design considerations for cover and spreads.
- Content placement, composition, balance and white space.
- Typography.
- Layout conventions.
- Use of margins or bleed.
- Use of colour.
- Decorative elements.
- Aesthetic qualities.
- Shortening or expanding copy to fit.
- Potential for use of media rich content (video, audio and interactive elements) for digital magazines.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Understand the considerations, codes and conventions of a specific genre of magazine for print and digital platforms		**A.D1**	Evaluate the effectiveness of codes and conventions used within magazines for a specific genre in appealing to the target audience and fulfilling the magazine's purpose across print and digital platforms.
A.P1 Explain the purpose, target audience, codes and conventions of design and layout for a specific genre of magazine. **A.P2** Explain the technical considerations of magazine production for print and digital distribution channels.	**A.M1** Analyse how codes and conventions of design and layout are used to appeal to the target audience for a specific genre of magazine. **A.M2** Analyse the opportunities and limitations of print and digital magazine production platforms in addressing audiences.		
Learning aim B: Develop materials for magazine production		**B.D2**	Prepare creative primary and secondary content relevant to a specific magazine genre, target audience and platform.
B.P3 Source appropriate secondary content for a magazine for a specific genre, audience and purpose. **B.P4** Generate appropriate primary content for a magazine for a specific genre, audience and purpose. **B.P5** Prepare materials appropriately for a magazine for a specific genre, audience and purpose.	**B.M3** Source and log accurately effective content for a magazine for a specific genre, audience and purpose. **B.M4** Generate effective primary content for a magazine of a specific genre, audience and purpose.		
Learning aim C: Produce magazine layouts in the codes and conventions of a genre.		**C.D3**	Evaluate the stages of magazine production, and the use of codes and conventions, to target a specific audience, genre and platform.
C.P6 Create layouts for a cover and double-page spread using appropriate codes and conventions of a specific genre and magazine platform. **C.P7** Manage the stages of magazine production appropriately for a specific genre and platform.	**C.M5** Create a cover and double-page spread for a specific genre and magazine platform, using effective codes and conventions to target a specific audience and managing the stages of magazine production effectively.		

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.M2, A.D1)

Learning aim: B (B.P3, B.P4, B.P5, B.M3, B.M4, B.D2)

Learning aim: C (C.P6, C.P7, C.M5, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- a range of magazines relating to different genres and target audiences
- computers and appropriate magazine design software for print or digital platforms which may also include drawing, painting, image manipulation, video and audio editing software
- the internet
- digital still cameras
- scanners
- digital drawing tablet
- traditional drawing and painting materials.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will select different magazines from a specified genre across both print and digital platforms, providing a detailed analysis of the target audience(s) for the selected magazines. They will evaluate the effectiveness of the selected magazines relating to different types of content, for example the use of editorials and reviews, the design and layout decisions, and the reasons for using them.

For example, when evaluating teen magazines, learners may discuss the effectiveness of an interview with a pop star who broke into the industry and now does charity work to try to give something back to society, thereby encouraging young people to aspire to be successful in their dream career and setting a positive role model. Learners could discuss how the video of the interview on the digital platform is more effective for a teen audience than the transcription in the print version, as the target audience is familiar with digital platforms and can access it on a variety of devices from anywhere – rather than having to travel to obtain a physical print copy or wait to receive a postal subscription.

Learners will evaluate how effective the use of codes and conventions of design and layouts are in supporting the content, and will go beyond obvious observations. For example, learners may comment that in the print version, the interview spans two columns in a larger typeface than other text on the page to make it stand out, and uses large attention-grabbing quotes alongside it to intrigue readers and encourage them to read the interview. Learners will relate the purposes of content in the same magazine. For example, they may observe that the opposite page of the spread contains an advertisement for a festival where the celebrity is appearing, which is mentioned in the interview, so the interview and advertisement enhance each other to promote the celebrity and the festival.

For merit standard, learners will provide an analysis of the target audience for a specific genre of magazine. They will analyse how codes and conventions of design and layout are used to appeal to that target audience, examples used to illustrate this are likely to be more obvious examples of the use of codes and conventions.

For example, learners may observe that a large picture of the celebrity, accompanied by the name in a large, brightly coloured font on the cover, draws attention to the interview content and encourages fans to purchase the magazine.

Learners will use examples to analyse the different opportunities and limitations regarding different platforms, for example a video of the interview can be shown on a digital platform, which is cheaper to distribute for the magazine producer, but which requires users to subscribe. However, at merit standard learners need not make qualitative judgements on the effectiveness, or otherwise, of the examples they use.

For pass standard, learners will explain the purpose and target audience for a specific genre of magazine. However, they may not go beyond the obvious. For example, learners may observe that the main purpose of the magazine is to entertain an audience of teenage female music fans. They will explain the use of most of the main codes and conventions of design and layout but may not relate them to specific examples or, where they do so, the examples may not illustrate why the codes and conventions have been used.

Learners will explain the differences between print and digital platforms, including the different types of content that can be used and the main distribution advantages of each, but they may be lacking illustrative examples.

Learning aim B

For distinction standard, learners will document clearly how they have considered different types of content and assessed them for their suitability to the genre, target audience and platform, before making a final selection of a cover and double-page spread; the purpose of the selection will be clear.

Content choices will be appropriate and will aim to go beyond the conventional, rather than copy existing formats. Different elements of content are likely to support and enhance each other. When generating content, learners should generate alternatives to select from, for example take a number of alternative photographs from which the cover shot might be selected. The selection process will be clear and relate to the shot content and to the aesthetic and technical qualities of the shot. Where secondary sources are used for content, the selection process must be thorough and use methods that would be appropriate in a professional context, for example comparing potential cover images available from photo libraries to determine which would be most suitable.

Copy should be generated by learners rather than simply copied and pasted from secondary sources, however secondary sources may be used to inform content, for example transcriptions of video interviews. Where used, the original sources will be cited. All text will be edited, prepared and proofread to ensure it is accurate in respect of spelling and grammar. All images must be prepared in a format, file size and quality fully appropriate to the specified platform.

For merit standard, learners will select content relating to a cover and double-page spread appropriate to the genre, target audience and platform.

The content selection process will be less rigorous than that demonstrated by distinction learners, for example learners may have taken two alternative cover photographs and chosen appropriately but the reasons for the selection will be less detailed. For example, they may state that the use of a shot of teenagers skateboarding is appropriate to the target audience but there will be less consideration given to the aesthetic and technical qualities of the shot, such as appropriateness of lighting. Selected content will be free from obvious technical flaws.

All text will be edited, prepared and proofread to ensure it is accurate in respect of spelling, although minor issues, for example incorrect use of apostrophes, may be evident. Images must be prepared in a format, file size and quality appropriate to the specified platform and while there may be minor flaws, for example some images for the print version may have been increased in size from smaller originals so they are not in full print definition, they will still be suitable for use, i.e. not pixelated or distorted.

For pass standard, learners will select content appropriate to the target audience, using a clear selection process.

Learner-generated content may be basic, for example a teen magazine may use photographs of learners' friends taken on a mobile phone. The content may be derivative and drawn from existing sources but the use of such content will not be copied directly, and the original source will always be cited. For example, learners may use images from an existing fashion magazine and select one that they will combine with text for use on their cover design.

All text must be edited, prepared and proofread to ensure it is accurate but some minor spelling or grammar issues, for example incorrect use of there/their, may be evident. Images must be prepared in a format, file size and quality generally appropriate to the specified platform. While there may be flaws, for example images from mobile phones used on the cover, or images from the web increased in size in the double-page spread, causing some pixelation, it will not be to the extent that the image becomes unrecognisable or clearly unfit for purpose.

Learning aim C

For distinction standard, learners will produce a cover and double-page spread for a specific magazine genre and platform, using codes and conventions of layout and design to clearly appeal to a specific target audience. The accompanying documentation will provide an explanation of the processes used, including how they have reviewed and prioritised management of the stages of magazine production processes and addressed any contingencies. They will justify the aesthetic, technical and production decisions taken and evaluate how the resulting product successfully appeals to the target audience.

For merit standard, learners will produce a cover and double-page spread for a specific magazine genre and platform, using codes and conventions of layout and design to appeal to a target audience. These may be less sophisticated than those used by a distinction level learner, for example the resultant design may be suitable for teenagers but may not use conventions and colours to target a specified gender. The accompanying documentation will provide an explanation of the processes used. It will show how learners have reviewed and prioritised management of the stages of magazine production processes and addressed any contingencies, but there will be little in the way of justification of the decisions taken.

For pass standard, learners will produce a cover and double-page spread for a specific magazine genre and platform, using some codes and conventions of layout and design to appeal to a target audience. These will be basic and the final design may have obvious flaws or use inappropriate fonts, for example learners may have not fully considered the typeface and 12 pt Courier font may be used throughout. The accompanying documentation will provide a basic explanation of the processes used but will not show creative and aesthetic decisions taken. Some stages of the process may have been rushed or missed completely, resulting in poor readability on a print magazine or some interactive elements of a magazine on a digital platform not working properly.

Links to other units

This unit links to:
- Unit 3: Digital Media Skills
- Unit 15: Advertising Production
- Unit 29: 2D Digital Graphics
- Unit 30: Page Layout and Design for Digital Media.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:
- guest speakers
- opportunities to visit suitable exhibitions.

Unit 18: Storyboarding for Digital Media

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners will gain an understanding of the storyboarding techniques used for digital media production and develop skills to produce storyboards for a range of media.

Unit introduction

Storyboarding is a highly skilled area of pre-production that gives the crew a visual representation of the production, as well as a plan of camera angles and movements and the use of sound and edits. In this unit, you will develop the skills that allow you to plan and contribute to pre-production planning for a range of audio-visual productions in a range of contexts.

You will start by exploring the use of storyboards in creative digital media productions and gain an understanding of their significance to the production process. You will also explore and practise applying a range of techniques that will enable you to construct and create your own storyboards for your own media productions.

You will gain an understanding of the purpose and use of storyboards in the creative media sector as a pre-production tool used in the planning and development of a range of moving image productions. The skills you develop will assist you in the complex and highly skilled world of moving image production. You can build on these skills to develop the skills and experience required to become a member of a production crew and to study moving image production at a higher level.

Learning aims

In this unit you will:

A Understand the use of storyboards in a range of digital media sectors

B Explore storyboard skills for production purposes

C Create and review storyboards for digital creative media production.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand the use of storyboards in a range of digital media sectors	**A1** Storyboards by production sector **A2** Purpose of storyboards **A3** Features of storyboards	A report on the use and history of storyboarding in different creative media contexts. A range of annotated exploratory materials from secondary sources.
B Explore storyboard skills for production purposes	**B1** Drawing and design **B2** Communication of camera placement, movement, height, level and angle **B3** Sound, edits and transitions **B4** Production purposes	A wide range of exploratory materials evidencing the use of a range of storyboard skills and techniques.
C Create and review storyboards for digital creative media production	**C1** Plan content and layout of storyboards for moving image production **C2** Create storyboards for moving image production **C3** Review storyboards' appropriateness and fitness for purpose	Planning materials evidencing rough sketches and annotations on a number of draft storyboards. Final drafts of a number of storyboards to be used in a range of production contexts. Annotated screenshots or written report/PPT reviewing own storyboard production.

Content

Learning aim A: Understand the use of storyboards in a range of digital media sectors

A1 Storyboards by production sector

The use of storyboards for pre-production planning in a range of contexts, such as:

- television
- films
- documentaries
- video shorts
- music videos
- animation
- games design.

A2 Purpose of storyboards

- To express ideas visually, e.g. images of actions/characters and sets in TV programmes, films and computer games.
- To communicate essential technical details for crew members, such as camera angles, movements and edits.
- To ease production processes and allow all crew members to have a visual representation of the finished product.
- To save time during production and ensure efficient outcomes.

A3 Features of storyboards

- Content:
  - images, camera movements, camera angles, sound direction, transitions and edits.
- Design:
  - as a means of visualising content of production on a scene-by-scene basis.
- Layout:
  - for ease of use, separation of images and directions, continuity, page referencing
  - style and format – eight-frame, six-frame, four-frame and single frame
  - sizes 0, 16:9, 4:3.

Learning aim B: Explore storyboard skills for production purposes

B1 Drawing and design

- Exploration of how drawing and design are used in storyboards to:
  - identify location
  - plan aesthetics
  - visualise characterisation
  - reflect *mise-en-scène*
  - identify character movements.

B2 Communication of camera placement, movement, height, level and angle

- Exploration of the range of camera shots and angles included in storyboards and the importance of these to camera operator and director.
- Camera movements:
  - pan – horizontal movement from side to side, e.g. left to right
  - tilt – vertical movement of camera, up and down
  - zoom – can be in or out and moves the focus closer or further away from an object
  - follow – physically following the subject with the camera
  - track – follows the action but stays a constant distance from it
  - dolly – mounted camera that travels along tracks – allows for smooth movement.

- Camera angles:
  - extreme long shot (ELS)
  - very wide shot (VWS)
  - long shot (IS)
  - mid shot (MS)
  - medium close up (MCU)
  - close-up (CU)
  - extreme close-up (ECU)
  - two-shot
  - over-the-shoulder shot (OSS)
  - point-of-view shot (POV)
  - dutch tilts
  - bird's eye view and worm's eye view.

B3 Sound, edits and transitions

- Exploring the use of sound in storyboards:
  - diegetic
  - non-diegetic.
- Edits and transitions in storyboards:
  - fade-in
  - fade-out
  - cut
  - wipe
  - dissolve.

B4 Production purposes

To provide visual reference for a range of production contexts and purposes, such as:

- visualisation of scenes in moving image productions, such as television programmes and films
- theatre productions to provide a detailed production plan and visual reference of actors, scenes and sets
- animation and special effects (SFX) to provide mock-ups of the action and assist in working out the screenplay
- comic book production to show mock-up of final piece
- interactive media and video game production, planning moving image content of productions.

Learning aim C: Create and review storyboards for digital creative media production

C1 Plan content and layout of storyboards for moving image production

- Content from initial planning and ideas generation.
- Content using script and stage directions.
- Rough drafts and designs.
- Sketching characters and backgrounds.
- Drafting content.
- Camera angles and movements.
- Edits and transitions.
- Sound content and sound cues.
- Sourcing and deciding on sound effects.
- Correct use of storyboard template/format/style appropriate to production type and chosen medium/media sector.

C2 Create storyboards for moving image production

- Production of storyboards for use as a production tool in a moving image production, such as:
  o film production
  o television production
  o music videos
  o dramas
  o documentaries
  o animation
  o video games.
- Appropriate storyboard style/content/format etc. for chosen production.
- Application of drawing and design techniques.
- Application of appropriate sound directions.
- Application of appropriate shot types, movements, angles and framing.
- Application of appropriate edits and transitions.

C3 Review storyboards' appropriateness and fitness for purpose

Review own storyboard production work in order to assess appropriateness and fitness for purpose, such as:

- suitability for medium
- appropriate use of style and format for chosen medium
- appropriate use of design techniques in visual content
- correct application of shot types, movements, angles and framing
- use of edits and transitions to create meaning
- suitability compared to original intentions
- response to feedback from others, e.g. production team, camera operator, director.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand the use of storyboards in a range of digital media sectors		
A.P1 Explain the purpose of storyboards in moving image production for different digital media context. **A.P2** Identify the features of storyboard designs that have been used for different production contexts.	**A.M1** Analyse the use, purpose and features of storyboard designs in communicating different purposes for different digital media contexts.	**A.D1** Evaluate the effectiveness of a range of storyboard designs in communicating ideas and information across a range of production contexts.
Learning aim B: Explore storyboard skills for production purposes		**B.D2** Develop creative skills in the use of design and drawing, camera shots and angles, sound and transition for a range of production purposes.
B.P3 Develop basic skills in the use of design and drawing, camera shots and angles, for a range of production purposes.	**B.M2** Develop effective skills in the use of design and drawing, camera shots and angles, sound and transition for a range of production purposes.	
Learning aim C: Create and review storyboards for digital creative media production		**C.D3** Plan and create storyboards for a range of moving image productions to near-professional standards and evaluate the effectiveness of the storyboarding techniques applied to own work making suggestions for future improvements, including appropriateness and fitness for purpose.
C.P4 Plan the content and layout of storyboards for two different moving image productions. **C.P5** Produce storyboards that communicate camera, sound and editing techniques to be applied in the production of two different moving image productions. **C.P6** Review own storyboards to ensure appropriateness and fitness for purpose.	**C.M3** Appropriately plan and create detailed storyboards for a range of moving image productions and analyse the appropriateness and fitness for purpose.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.M2, B.D2)

Learning aim: C (C.P4, C.P5, C.P6, C.M3, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to a wide range of materials that will allow for the production of storyboards, such as appropriate online design packages or art materials that will allow for the completion of designs and visual content.

Any storyboards produced on digital platforms should be printed out in colour and displayed and/or mounted appropriately.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will give a clear and detailed evaluation of a wide range of uses and purposes of storyboard design in moving image production. Learners will reflect on the changes and nuances between mediums and will show an in-depth knowledge that expands beyond their own specialist subject area. Learners will conduct detailed investigations into a number of different designs and will be able to discuss how and why they are used in a range of production contexts; clearly differentiating between different styles and purposes. Written work will consistently evidence a detailed understanding of the developments in storyboarding for the different creative media sectors.

For merit standard, learners will evidence a sound understanding of a moderate range of the uses and purposes of storyboards in moving image production. They will reflect on the differences between mediums in and outside of their own specialist subject area. Learners will conduct thoughtful investigations into different designs and will be able to differentiate how and why they are used in a range of production contexts; identifying different styles and purposes. Written work will evidence a sound understanding of the developments in storyboarding for different creative media sectors.

For pass standard, learners will show that they understand the use and purposes of storyboards in moving image production in different mediums and not just the specialist subject area in which they are working. They will investigate storyboard designs that have been used in a range of production contexts and may be able to differentiate between different styles and purposes. Written work will evidence an understanding of the developments in storyboarding for different creative media sectors.

Learning aim B

For distinction standard, learners will carry out detailed and thorough creative development of drawing and design skills in relation to the many drawing and design techniques used in storyboards for different mediums. Learners will show a clear and in-depth understanding of the variances in the many different mediums, which depend on the desired outcome. Their understanding of the range of camera shots and angles, use of sound, edits and transitions will be of near-professional standard and will be applied in imaginative and creative ways to a wide range of general media and specific storyboard related contexts.

For merit standard, learners will show a thorough development of drawing and design skills used in a number of different storyboards, for a range of different mediums and will show a clear understanding of how these can vary depending on outcome. There will be evidence of a clear understanding of a wide range of camera shots and angles and of why these must be identified correctly in storyboards from a number of different mediums. Learners will also show clear and concise knowledge and understanding of the use of different sound, edits and transitions and will consistently identify them correctly in a general media and specific storyboard related context.

For pass standard, learners will show evidence of basic drawing and design skills used in storyboards for different mediums and will understand that these can vary depending on outcome. Learners will have an understanding of a range of camera shots and angles and know why it is important for these to be identified correctly in a storyboard.

Learning aim C

For distinction standard, learners will give evidence of extensive and focused planning of the content and layout of their own storyboards, which will be fit for use in a wide range of different moving image productions. These will be in their own specialist subject area as well as a number of other mediums. All planning materials will be highly appropriate and will allow for the development of imaginative and creative storyboards for different moving image productions. Final drafts of all storyboards produced will be well thought out and free from errors, to the extent that they will be considered a highly appropriate working document that can be used in a wide range of production contexts effectively. When reviewing their own storyboard production work, learners will make evaluative and analytical judgements regarding the overall style, content and fitness for purpose of the work, detailing how their ideas developed, and the skills and techniques they used throughout the process.

For merit standard, learners will give evidence of clear and thoughtful planning of the content and layout of their own storyboards, which will be fit for use in a range of different moving image productions. These will be in their own specialist subject area as well as some other mediums. All planning materials will be appropriate and will allow for the creation of clearly focused and workable storyboards for different moving image productions. Final drafts of any storyboards produced will be well-structured and contain almost all the relevant content; they will be mostly free from errors and will be considered appropriate as working documents that could be used in different production contexts. When reviewing their own storyboard production work, learners will make mostly evaluative judgements regarding the overall style, content and fitness for purpose of the work, but may occasionally lapse into description or outline. They will mostly detail how their ideas have developed and discuss the skills and techniques they used throughout the process.

For pass standard, learners will give evidence of planning the content and layout of their own storyboards for different moving image productions. These will be in their own specialist subject area as well as, at least one, other medium. Their planning will be generally appropriate and will allow them to create storyboards for moving image production. Planning materials could include rough sketches and annotations on a number of draft storyboards; these may not have been selected with care and will not always reflect an ongoing process of change and adaptation. Final drafts of a number of storyboards will be produced and they may be good enough to be considered a working document in a range of production contexts. When reviewing their own storyboard production work, learners will make basic observations and broad statements and will often fail to make analytical judgements regarding the overall style, content and fitness for purpose of the work.

Links to other units

This unit links to:
- Unit 10: Film Production – Fiction
- Unit 13: Digital Games Production.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:
- guest speakers and artist exemplar work
- opportunities to visit suitable exhibitions.

Unit 19: Scriptwriting

Level: **3**
Unit type: **Internal**
Guided learning hours: **60**

Unit in brief

Learners will develop their understanding of the role of scriptwriters before exploring scriptwriting techniques and developing scripts for media products.

Unit introduction

Scriptwriting is a key part of the production process of most media texts. Whether providing dialogue in fictional products, continuity pieces during broadcasts or content for delivery by presenters, understanding the format, nature and purpose of a script is key to working successfully in the creative media industries.

In this unit, you will look at the roles and responsibilities of scriptwriters in the television, film, radio and computer games industries, examining the legal and ethical considerations involved in their work. You will expand on your knowledge of the nature and purpose of scripts for different media products. You can then apply your understanding of the conventions of this process to the research and development of industry-appropriate scripts.

This unit could lead directly to employment in a range of writing and development roles or, for example, in creative teams focusing on games design, production teams in radio or television or development teams in the film industry. This unit is particularly valid for progression pathways on to screenwriting, radio production, games design, journalism or television production in higher education.

Learning aims

In this unit you will:

A Examine the role of a scriptwriter

B Explore scriptwriting formats and conventions for media products

C Produce scripts for media products.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Examine the role of a scriptwriter	**A1** The roles and responsibilities of scriptwriters in the media industry **A2** Legal and ethical considerations for scriptwriters in the media industry	A written report on the nature of the scriptwriter's role, the legal and ethical considerations they must make when working and how their role works as part of the development process. A presentation exploring the format and conventions of industry-live scripts, including analysis of the use of standard writing techniques to appeal to an audience.
B Explore scriptwriting formats and conventions for media products	**B1** The formats of scripts for media products **B2** The conventions of scripts for media products	
C Produce scripts for media products	**C1** Researching and preparing background material for scripts **C2** Producing script proposals **C3** Producing scripts	The creation of a proposal document, background research into a topic and eventual creation of a script for a given media product.

Content

Learning aim A: Examine the role of a scriptwriter

A1 The roles and responsibilities of scriptwriters in the media industry

- Job roles – producers, directors, script editors, agents, writers (including commissioning editors), exploring specific scriptwriting practitioners.
- Commissioning bodies – corporations, independent production companies, independent directors, organisations, competitions and charities.
- The commissioning process – pitching, budget allocation, greenlighting and optioning.
- The scriptwriting process – planning, script editing, involvement in production, shooting script production, page lockdown, adjustment during shooting.
- Seeking work as a scriptwriter – submission of solicited material, unsolicited submissions and competition briefs.
- Working freelance as a scriptwriter – work with agents, networking, pitching to commissioners, optioning of scripts and back end bonuses.
- Developing key skills for working effectively as a writer – networking, communicating effectively, working collaboratively with others, strong research skills, effective time management, strong organisational abilities, creative writing skills, awareness of current affairs and knowledge of current industry trends.
- The varying demands and requirements of scriptwriters in different industries – the requirement for factual television scriptwriters to conduct careful research and fact-checking, the need for scriptwriters in gaming to include branching narratives in their products and the requirement for radio scriptwriters to consider sound effects and the use of music beds.

A2 Legal and ethical considerations for scriptwriters in the media industry

- Legal considerations when working as a scriptwriter – copyright, blasphemy, watershed issues, obscenity law, libel, defamation and plagiarism.
- Ethical considerations when working as a scriptwriter – taste, decency, offensive content, censorship, representation of events or individuals.
- The importance of intellectual copyright.

Learning aim B: Explore scriptwriting formats and conventions for media products

B1 The formats of scripts for media products

- Script formats for different media sectors (radio, television, computer games, film) – use of standard font, page layout, use of abbreviations and generic terminology, page headers and footers, page numbering, colour coding and style.
- Script considerations for different genres – entertainment and factual programming.
- Style of script – house styles, signposting, in and out cues, genre of product, tone and mode of address.
- Compliance with guidelines distributed by broadcasting corporations or organisations.
- Information required in a script, depending on media product type.
- Character direction, camera direction, shot descriptors.
- Production team information – set, costume and direction suggestions for a television drama.
- Branching dialogue for gaming, where there are several responses provided in conversations to allow for the interaction of a player.
- Support copy:
  - continuity links for live broadcast
  - trivia points for sports broadcasters
  - background summaries for significant event or live news broadcast
  - sight-readable script and phonetic spelling of difficult words, explanatory content regarding the use of acronyms or jargon.

B2 The conventions of scripts for media products

- Use of language, rhythm and tone to engage, excite or evoke emotion in an audience.
- Providing clarity and direction.
- Structuring and developing narrative and story arcs and the construction of wider, long-running narratives in existing media products like soap operas.
- Use of persuasive language, terminology, tone and syntax to promote and convince listeners or viewers of a message or meaning.
- How scripts are produced to appeal to or directly relate to different audiences differentiated by age, gender, ethnicity, socio-economic background and geographic location.
- Use of language in speech – dialect, slang, regional accents, colloquial terms, jargon, politically sensitive language, verbal shorthand and buzzwords.
- Clarity and intended meaning of language – use of ambiguity, innuendo, ambiguity, hidden meanings, allusion, suggestion, implication and inference and identification of how intended meanings have been communicated.

Learning aim C: Produce scripts for media products

C1 Researching and preparing background material for scripts

- Secondary research using existing material and media products – reading and analysing news stories, comment pieces, scrutinising previously produced content on similar subjects, online forums/discussions and opinion pieces.
- Primary research activities – original interviews, focus groups, surveys, questionnaires, observations and visits.
- Conversion or adaptation of content from other forms or existing products.
- Preparing found material by analysing quantitative and qualitative data for relevance and validity, identifying facts and quotes for use in the script or as inspiration for content.

C2 Producing script proposals

- Featuring relevant details – the title, an overview of the proposed product with reference to genre, scenario, suggested target audience, unique selling points, product intentions, character briefs for fictional products, messages for factual products, talent requirements and proposed delivery formats.
- Identifying the role of the proposal in the process of working as scriptwriter – its use as an industry standard document to outline content and detail intentions to a client.
- Utilising suitable presentation format for the intended sector of the industry using word processing, inclusion of contact details, formal tone and style, effective communication and reference to industry expectations.

C3 Producing scripts

- Employing appropriate linguistic conventions – syntax, vocabulary, target audience considerations, allusion and reference, formal and colloquial language use, WAR (warn, advise and repeat) and definition of terminology or jargon.
- Application of conventional formats in line with industry expectations.
- Meeting client needs and expectations.
- Drafting and editing in light of feedback or changes to brief or client expectations.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Examine the role of a scriptwriter		
A.P1 Explain the roles and responsibilities of scriptwriters in the media industry. **A.P2** Explain legal and ethical responsibilities of scriptwriters.	**A.M1** Analyse the role and legal and ethical responsibilities of scriptwriters in the media industry, referring to specific scriptwriting practitioners.	**A.D1** Evaluate the role and legal and ethical responsibilities of scriptwriters in the media industry, referring to contrasting scriptwriting practitioners.
Learning aim B: Explore scriptwriting formats and conventions for media products		**B.D2** Evaluate the purpose and effectiveness of the format and conventions used in existing scripts for different types of media product.
B.P3 Explain the format of existing scripts for different media products. **B.P4** Explain the conventions of scriptwriting for different media products.	**B.M2** Analyse existing scripts for different media products, explaining the format and conventions used.	
Learning aim C: Produce scripts for a media product		**C.D3** Produce an accomplished, creative script for a defined media product, comprehensively using conventions, formats and terminology.
C.P5 Produce a proposal for a script for a defined media product.	**C.M3** Produce a refined, completed script for a defined media product, effectively using conventions, formats and terminology.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There are a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aims: A and B (A.P1, A.P2, B.P3, B.P4. A.M1, B.M2, A.D1, B.D2)

Learning aim: C (C.P5, C.M3, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- software used in the production and formatting of industry standard scripts for different sectors such as FinalDraft (film), CeltX or Adobe Story (television and radio) or ChatMapper or ScriptEase (for branching computer game scripting)
- a range of scripts produced for media products from across the film, computer game, television and radio sectors for analysis and examination
- case studies of practitioners from the industry.

Essential information for assessment decisions

Learning aims A and B

For distinction standard, learners will use evaluative skills to consider the role of scriptwriters and the impact this has on the scripts that they produce. They will identify clearly how work is commissioned and how the process influences which work is taken forward for development. They will show an ability to identify and communicate clearly the arguments surrounding the legal and ethical considerations that scriptwriters have to work with, articulating how this impacts on their work, for example how the proposed Pan European Game Information (PEGI rating for a game may impact on the use of profanity in dialogue.

Learners will use professional presentation skills and accurately employ vocational terminology throughout their work. They may choose to focus on scriptwriting in a sector that relates directly to their own specialism, evaluating specific scriptwriting practitioners. They will, however, demonstrate an overall understanding of the processes involved in all sectors across the industry, which may impact on these evaluative judgements.

For merit standard, learners will analyse with clarity the role of the scriptwriter and the way in which commissioning works, making clear links between the process and the responsibilities of the writer when producing scripts for media products. They will touch on the varied procedures and responsibilities across different sectors of the industry but show a deeper knowledge and understanding of a chosen sector, as listed in the unit content. They will demonstrate, with examples, a distinct understanding of the implications of legal and ethical considerations and how this may have influenced the creative decisions made by specific scriptwriting practitioners.

Learners' work may falter slightly in its use of accurate vocational terminology but should largely employ appropriate language and demonstrate the higher demand ability to analyse.

For pass standard, learners will explain clearly the role and responsibilities of a scriptwriter, identifying the job roles connected to this post and the organisations that commission work for the different sectors of the media industry. They will understand the role that commissioning plays in generating income for scriptwriters as well as media production in the industry. Learners will explain the role of scriptwriters in the larger scope of media production and how this role changes throughout the production cycle, demonstrating an understanding of the legal and ethical responsibilities scriptwriters have. They will explain the impact that these can have on the work of scriptwriters, with a clear focus on how this impacts on the nature of finished media products. It is expected that learners will tailor their investigations to the sectors that they are focused on working in, but they should have a working knowledge of how these processes differ in each of the industry sectors.

Learners' use of vocational terminology may be limited in parts and there may be flaws in the standard of presentation of work, although this should not detract from the clarity of meaning.

Learning aim C

For distinction standard, learners will demonstrate that they can use background material effectively to inform the careful creation of a proposal and a script of at least 800 words. The proposal should demonstrate a detailed understanding of the content required by a document of this nature in the sector they are writing for. The script should demonstrate that they can comprehensively apply the conventions of the form and correctly utilise formatting conventions. Accurate use of technology should be applied throughout their work and it will be largely free from errors in expression or format. The work should demonstrate an accomplished approach to the task, using innovative solutions to narrative and structure and a thoughtful approach to character development, tone or persuasive content – depending on the nature of the product being written for.

For merit standard, learners will need to demonstrate that they can use the background research material gathered effectively in order to produce a considered proposal and finished script of at least 800 words. Their work should demonstrate clearly how this research has influenced their writing and they should use correct vocational terminology throughout. Their work should also show that they have taken into account any feedback on the content produced to meet clients' needs and expectations. In order to achieve this, learners must ensure that the conventions of scriptwriting for the sector they are writing for are applied consistently. Additionally, the content normally expected of a proposal for a script in this sector are explained in detail. Their work should demonstrate confidence in its use of language and ideas developed within any narrative or structure involved in the scripting. There may be some minor flaws in style and format but this should be minor and not undermine the communication of information within the script.

For pass standard, learners' produced proposal should feature the information normally expected for a document of this nature, according to the sector being written for. Learners must show that they are able to research and exploring the subject they will be writing on. It is expected that they will demonstrate that they are aware of and able to use both primary and secondary research techniques, appropriate to their brief. It is essential that learners can demonstrate an ability to apply the understanding gained throughout the unit to the creation of a proposal and a finished script. The script must be at least 800 words in length and needs to be presented in a format that utilises the conventions appropriate to the media sector that learners are writing for. It is expected that learners will draft their work to produce a final submission, but at this level this may still include some errors in style or format and may be lacking in imagination.

Links to other units

This unit links to:

- Unit 17: News Production
- Unit 11: Radio Production – Fiction.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities to do so.

This unit would benefit from employer involvement in the form of:

- guest speakers
- work experience
- opportunities to visit suitable exhibitions.

Unit 20:   Single Camera Techniques

Level: **3**
Unit type: **Internal**
Guided learning hours: **60**

Unit in brief

This unit will explore the techniques needed to produce a single camera production.

Unit introduction

While camera equipment is becoming ever more accessible and portable, the fundamental techniques for single camera production remain unchanged. Good quality, well-exposed and composed footage can be achieved on all cameras with manual functions and can lead to professional outcomes.

In this unit, you will focus on the techniques of using a single camera to capture high-quality footage to create a narrative production. You will investigate manual functions of a camera as well as the compositions and support or movement of camera shots. You will then produce recorded material demonstrating your use of advanced camera techniques, including movements, different mounting options and make selections from this material to produce appropriate footage for a single camera production.

Most productions in the corporate and non-broadcast media industry are made using single camera techniques and it is now more accessible than ever to produce your own short films. The skills you learn and develop in this unit can be taken to employment or developed further in higher education.

Learning aims

In this unit you will:

A Understand single camera productions
B Explore single camera techniques
C Produce a single camera production.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand single camera productions	**A1** Purposes of single camera production **A2** Single camera techniques	A weblog or voiceover footage used to evaluate the effectiveness of single camera techniques in a range of productions.
B Explore single camera techniques	**B1** Plan a single camera production **B2** Shoot a single camera production	Planning a single camera shoot for a defined purpose and shooting footage for a single camera production using manual camera settings and a range of shot types, angles and movement accompanied by a production log, or voiceover footage, to detail the technical and aesthetic decisions taken.
C Produce a single camera production	**C1** Select appropriate footage for a single camera production **C2** Post-production and review of single camera production	Selection of footage from rushes annotated to justify decisions taken. Final single camera production accompanied by log justifying decisions taken, with reference to audience reaction to screening.

Content

Learning aim A: Understand single camera productions

A1 Purposes of single camera production

- Types of single camera productions:
  - drama, soap opera or comedy
  - documentary
  - adverts
  - narrative-based music videos
  - corporate and promotional videos.
- Platforms for screening single camera productions:
  - television
  - cinema
  - interactive digital platforms
  - film festivals.
- Benefits and limitations of single camera productions:
  - cost benefits in using less equipment and staff
  - simpler set up without needing to ensure other cameras aren't in shot
  - more time consuming filming as only one angle can be filmed at a time so multiple takes will be planned and shot out of sequence to allow a variety of camera angles in final edit
  - multiple takes allow for careful staging and framing of shots but these need to be carefully matched during editing process.

A2 Single camera techniques

- Shot types:
  - establishing shot, often an extreme wide shot, to establish the geographical location of a scene
  - master shot provides a shot of the full area of the action, normally including all actors present in the scene
    - it is often returned to during a scene to re-establish a scene's overall context, show major changes in the scene's basic elements, such as movements of actors or new actors entering, and for bridging jumps in continuity during the final edit
  - tracking shots to follow the action
  - cutaways to focus on something other than the main action, such as a shot of audience reaction.
- Shot framing:
  - wide shot to focus on the key subject or subjects which fill most of the screen
  - mid shot to focus in more detail on a specific subject, e.g. showing a single actor from waist up, and two shot where two actors are framed in the shot
  - medium close-up for head and shoulders shots and close-ups to capture full facial expressions or hand actions
  - extreme close-up to focus in on smaller details or expressions
  - point of view (POV) shot to show a view from a subject's perspective
  - consideration of composition, including rule of thirds
  - filming conversations
  - over-the-shoulder angles
  - three angle shooting
  - shot-reverse-shot and the 180-degree rule
  - shot composition and framing.

- Camera angles:
  - eye level
  - bird's-eye, shot directly from above
  - high angle, with the camera angled down towards the subject, often used to make the subject look less powerful
  - low angle, with the camera tilted towards the subject from below, often to give the subject a sense of power or dominance
  - Dutch tilt, with the camera deliberately slanted with the horizon line at an angle for dramatic effect.
- Camera movement:
  - equipment to facilitate movement, including handheld camera, shoulder mount, Steadicam®, track, dolly, jib
  - dollying, trucking and panning
  - zooming and consideration of the effect on the angle and framing of the shot
  - dolly zoom or 'trombone shot'
  - focus pulling.
- Maintaining continuity:
  - ensuring consistent scene set-ups
  - ensuring consistent lighting (lighting set-up or awareness of natural light and weather conditions at different times of day)
  - use of tripods to ensure shot stability and consistent positioning.
- Shooting for eyeline matching.

Learning aim B: Explore single camera techniques

B1 Plan a single camera production

- Developing/interpreting a concept for a single camera production in response to a brief.
- Consideration of objectives, including purpose and intended audience response.
- Development of shooting script from script/storyboard.
- Planning logistics to shoot a single camera production out of sequence:
  - filming shots at a particular location at the same time regardless of script sequence
  - filming shots using the same camera position and lighting in a scene together
  - filming shots involving specific actors in as short a timeframe as possible
  - filming shots requiring specialised production equipment (cameras, lenses, microphones) together to minimise equipment transportation.

B2 Shoot a single camera production

- Management of the shoot:
  - safe working practices
  - communication with actors and crew
  - contingency plans and dealing with unforeseen circumstances
  - reshoot takes as necessary
  - logging footage.
- Checking location/studio setup for suitability:
  - camera positioning and movement
  - lighting setup
  - audio setup.
- Using appropriate camera settings:
  - using video gain with consideration of the impact on image quality
  - frame rate settings
  - shutter speed settings
  - zebra function
  - white balance, presets, daylight and tungsten settings.

- Using single camera techniques to build the narrative:
  o using multiple takes to shoot different shot types
  o consideration of shot framing, angles and movement
  o maintaining continuity
  o additional sound recording, including wild tracks.

Learning aim C: Produce a single camera production

C1 Select appropriate footage for a single camera production

- Grading the rushes.
- Selection of footage from rushes:
  o selection of shot types, angles and framing to build narrative
  o selection of shot lengths to maintain appropriate pace
  o maintaining continuity
  o consideration of image quality, including exposure, colour balance.
- Organising necessary reshoot of any shots as appropriate.
- Logging any post-production image correction required.
- Justification of decisions.

C2 Post-production and review of single camera production

- Editing together multiple shot types to build narrative and maintain continuity.
- Synchronising sound and video tracks.
- Review of edited single camera production:
  o feedback from focus group screening
  o comparison with original objectives, purpose and intended audience response
  o technical quality
  o justification of fitness for purpose or any necessary changes required.
- Complete final changes to edit as necessary.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Understand single camera productions		**A.D1**	Evaluate detailed examples of the uses of different single camera techniques and their effectiveness in different types of single camera production.
A.P1 Explain the purposes of different types of single camera production. **A.P2** Explain the use of single camera techniques.	**A.M1** Analyse the use of single camera techniques within different types of single camera production.		
Learning aim B: Explore single camera techniques		**B.D2**	Demonstrate accomplished planning skills and a high level of technical expertise to shoot footage for a single camera production, justifying creative and technical choices made.
B.P3 Plan a single camera production. **B.P4** Shoot footage for a single camera production.	**B.M2** Demonstrate effective application of single camera planning and recording techniques to shoot footage for a single camera production.		
Learning aim C: Produce a single camera production		**C.D3**	Produce an accomplished and creative single camera production using post-production techniques to consistently build narrative and maintain continuity, justifying creative and technical choices made.
C.P5 Review the footage and select appropriate shots for use in a single camera production. **C.P6** Carry out post-production to create a completed single camera production.	**C.M3** Produce a high-quality single camera production using post-production techniques to effectively build narrative and maintain continuity, explaining the choices made.		

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.P4, B.M2, B.D2)

Learning aim: C (C.P5, C.P6, C.M3, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- camera equipment that enables manual functions to be manipulated
- a range of camera mounts such as tripod, dolly, track, jib, Steadicam®, mono-pod
- external microphones (for recording whilst filming).

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will demonstrate a clear understanding of why single camera techniques are used in specific productions, and show how specific techniques are used to achieve specific objectives in different types of single camera production. There will be keen analysis of the existing uses of single camera techniques in professional practice across a range of examples which could be presented in a variety of ways, including weblogs, presentations or recording voiceovers on existing examples of single camera productions. Learners might say, 'This shot in Wes Craven's *Scream* uses a Steadicam as the camera tracks slowly around the house following the character. This floating camera technique produces an eerie and unsettling effect on the audience, as they are used to cameras being still, and is perfect to use in horror or thriller sequences to establish the scene. To keep everything in focus, the filmmaker would have needed a fast film speed as the aperture on this camera would have needed to be quite narrow to move around the set.' Learners will understand the different benefits and drawbacks of techniques and equipment.

For merit standard, learners will have a working understanding of the use of camera techniques and equipment in existing practice, but will not be able to make the links between individual elements and each other, nor the impact that the use of different techniques may have on the viewer. They might say, 'This camera work in Wes Craven's *Scream* keeps moving and this makes an eerie effect throughout this scene. The camera operator would have used a Steadicam to produce this.'

For pass standard, learners will explain different purposes of single camera production and the key benefits and limitations of using single cameras. They will explain key single camera techniques, but may be non-specific and not identify where and how they are used. Where existing media texts are discussed, they will be mainly descriptive.

Learning aim B

Though learners may work in groups to produce longer single camera productions, learners must individually identify their contribution to the decision-making process for both technical and aesthetic aspects of a substantial element in the production. This could be in the role of director or camera operator, and also in a support role to other learners for other elements of the production.

For distinction standard, learners will plan a single camera production with clear objectives, including purpose and intended audience response. They will use single camera equipment and techniques creatively to produce high-quality footage that meets its original intentions. There will be evidence of clear and detailed planning for the shoot before it takes place, including consideration of potential contingencies. Camera shots will be correctly exposed, white balanced and well-framed, and demonstrate purposeful use of manual functions. At this standard, the footage will be fit for purpose. Learners will justify this through a production log or footage with voiceovers that explain how they used different techniques and what this has done to the image. For example, learners might say, 'In this shot, I have set the camera up with a wide aperture of f/2.8 and this gives me a shallow depth of field allowing me to only have the person in the foreground in focus and blur out everything else. To compensate for the high levels of exposure this gives the shot, I have adjusted the shutter speed to 1/250 sec until the zebra pattern disappears from the viewfinder display.'

For merit standard, learners will use single camera techniques to produce effective footage that is well-executed and that meets the intended genre. Learners will show effective planning and will be clear on the objectives of the production and there will be some indication of intended audience response, however this may be relatively generic. For example, learners might say, 'The scene is intended to make the audience laugh, but also empathise with the main character's frustration with her job.' They may not have considered all contingencies, such as lighting changes throughout the shoot, or may have underestimated the amount of takes needed. Camera shots will generally be correctly exposed, white balanced and well-framed, there will be very few flaws in the footage and footage will be sufficient and fit for purpose. Learners will give evidence of their competent use of the manual functions of a camera and a range of shot types and movements. The footage will be successful and learners will be able to indicate how different shots have been achieved. They might say, 'In order to get this shot I turned the aperture to f/2.8 and was able to perform a pull focus but this made the shot very over-exposed.'

For pass standard, learners will have general objectives, for example to produce a pilot scene for a comedy about a group of friends. Learners' planning is likely to be limited to a shooting script and basic logistical planning for shooting at a single location. The range of shots planned for may be limited. Learners will show an awareness of the main manual functions of a camera by producing footage that demonstrates their use of these manual functions, but they are likely to use them in a limited manner to produce footage for a single camera production. The final footage will be simplistic in terms of techniques and there may be exposure and framing errors. Learners will offer examples of their experimentation with aperture, focus, shutter speed, but will not be able to discuss the impact of the shot beyond some very basic observations. For example, learners might say, 'In this shot the aperture is wide (f/2.8) and this makes the shot very bright.' Learners will also use a range of camera techniques and movements and be able to describe them, for example, 'This is a panning shot from left to right using a tripod.' Learners will be unlikely to move beyond the descriptive for this standard.

Learning aim C

Though learners may work in groups to review rushes and edit longer single camera productions, learners must individually identify their contribution to the decision-making process for both technical and aesthetic aspects of a substantial element in the selection and post-production process.

For distinction standard, learners will select high-quality footage from a wide range of rushes and justify, by annotation, the reasons for their selections. Consideration will be given to composition, exposure and continuity. Where footage needs to be reshot, or modified at post-production, this will be detailed and acted on. The footage will then be combined in post-production to create a complete and highly-effective single camera production. The production will fulfil its original objectives and its intended impact on the target audience. This will be judged by means of a screening which may result in changes being made to the final production. All creative and technical decisions will be justified by means of a log or second version of the production with a voiceover track. While editing should be sufficiently competent so as not to detract from the narrative or continuity of the production, for this unit assessment should focus on how shots are combined to create the narrative, and the continuity in the finished production when they are combined. For example, learners will be assessed on consistent lighting, rather than on any minor flaws relating to the technical aspects of the final edit.

For merit standard, learners will select high-quality footage from a range of rushes and explain, by annotation, the reasons for their selections. Learners' explanations will include some reference to composition, exposure and continuity. Where footage needs to be reshot or modified at post-production, this will be referred to but learners' decisions may be slightly flawed, for example they may settle for less than ideal footage or opt to try to correct some factors in post-production which should really require a reshoot. The footage will then be combined in post-production to create a complete and effective single camera production fulfilling its original objectives and its intended impact on the target audience. This will be judged by means of a screening, although any changes following the screening are likely to be limited. The final production will have a clear and effective

narrative and will be free of continuity errors, but shot combination may not always be used to best effect. For example, a shot of a key actor addressing a crowd may be overly long rather than using a cutaway to the crowd reaction. Creative and technical decisions will be explained by means of a log or second version of the production with a voiceover track.

For pass standard, learners will select appropriate footage from a range of rushes but annotation is likely to be limited to a basic description for their choices which may not always refer to composition, exposure or continuity. For example, learners might say, 'I chose shot A rather than shot B because the actor started laughing halfway through shot B'. While footage will be appropriate and to an acceptable standard, learners may not identify flaws in footage such as minor exposure issues or slight camera shake. The footage will then be combined in post-production to create a complete single camera production. The final production will have a clear narrative and continuity but may have minor continuity errors, for example, camera positioning differences during a filmed conversation due to unplanned retakes being required after the camera had been moved. The range of shots used in the final production may be limited.

Links to other units

This unit links to:
- Unit 10: Film Production – Fiction
- Unit 21: Film Editing
- Unit 35: Multi Camera Techniques.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:
- guest speakers
- opportunities to visit suitable exhibitions.

Unit 21:   Film Editing

Level: **3**
Unit type: **Internal**
Guided learning hours: **60**

Unit in brief

Learners will explore the purposes and techniques of editing for film and television and develop skills in different editing tools to produce a final, edited sequence.

Unit introduction

A wide range of editing techniques and conventions have been developed to create meaning in film sequences. Such techniques are used to engage the viewer and keep their interest by following the action, moving the narrative forward, or eliciting an emotional response.

In this unit, you will learn about the development of different editing purposes, conventions and techniques. You will explore how the pioneers of film editing have used editing techniques and how they have developed more sophisticated applications. You will develop skills in digital editing techniques and create a final, edited sequence for a specific purpose.

The skills you will develop in this unit can be applied to edited sequences for a range of different purposes, and the sequence you produce for this unit can form part of a digital portfolio of work for progression to employment or higher education.

Learning aims

In this unit you will:

A Understand the techniques and applications of editing for film and television
B Explore the use of editing tools, techniques and conventions for a specific purpose
C Create a digitally edited sequence for a specific purpose.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand the techniques and applications of editing for film and television	**A1** Types and purposes of editing for film and television **A2** Applications of editing techniques	A report which examines historic and contemporary examples of the types, purposes and techniques of editing for film and television, applied to different purposes.
B Explore the use of editing tools, techniques and conventions for a specific purpose	**B1** Ideas generation for edited sequences **B2** Digital editing **B3** Using continuity and non-continuity editing techniques and conventions	A minimum of two developed ideas for edited sequences, using both continuity and non-continuity editing techniques for a specific purpose or purposes, demonstrating the use of different tools, techniques and conventions. Supported by an annotated ideas development portfolio, including initial ideas and experimentation.
C Create a digitally edited sequence for a specific purpose	**C1** Producing an edited sequence	A production log, including a schedule, asset management and justification of the creative and technical choices made throughout. A final edited sequence intended to fulfil a specific purpose.

Content

Learning aim A: Understand the techniques and applications of editing for film and television

A1 Types and purposes of editing for film and television

- Types of editing for film and television:
  - continuity editing
  - non-continuity editing.
- Purposes of editing for film and television:
  - manipulate time, including speed up, slow down, compress time, stretch time
  - flashbacks, flash forwards, e.g. to fit a specified running time
  - control the perception of space to create a logical and believable space between characters or objects not sharing the same shot
  - controlling rhythm and pace to control the flow of the production.
- Functions of editing for film and television:
  - create narrative
    - creating motivation to further the narrative (motivated editing)
    - development of drama
    - providing and withholding information
  - create continuity between shots (continuity editing)
    - following the action
    - changing location
    - changing timeframe, including use of flashbacks
  - create audience reaction and engage the viewer
    - creating suspense
    - creating pace
  - create meaning
    - juxtaposing elements within editing
    - creating empathy with a character
    - creating bias in fiction or documentary editing.

A2 Applications of editing techniques

- Editing techniques for film and television:
  - establishing shots
  - cutaways and cut-ins
  - 30-degree rule
  - jump-cutting – avoiding accidental jump-cuts and creating purposeful ones
  - shot/reverse-shot
  - 180-degree rule
  - eyeline matching
  - match cuts (graphic match and match on action)
  - seamless editing (continuity)
  - montage, e.g. Eisenstein
  - juxtaposition, e.g. the Kuleshov Effect
  - cross-cutting to combine separate scenes that occur simultaneously into a single scene, e.g. D.W. Griffith
  - parallel editing to edit together separate scenes that may or may not share the same timeframe to draw parallels between them and thereby create meaning
  - freeze frame
  - slow motion
  - split screen
  - wipes
  - dissolves
  - fades (up and down, to black, to white).

Learning aim B: Explore the use of editing tools, techniques and conventions for a specific purpose

B1 Ideas generation for edited sequences

- Defining the purpose of the edited sequence.
- Context and genre.
- Defining appropriate continuity/non-continuity techniques.
- The intended effect of the application of editing on the narrative, audience or meaning.
- Ideas generation.
- Creative direction and influences.
- Generating documentation of intended narrative
  - storyboards
  - marking up a script.

B2 Digital editing

- Using digital editing software to create video sequences:
  - importing clips
  - setting up sequences in an appropriate format
  - editing in source and sequence windows
  - nesting sequences.
- Using digital editing tools to edit video sequences:
  - trimming clips, including three- and four-point editing
  - editing to specific time constraints
  - inserting and overlaying clips
  - using in, out and scene markers.
- Using effects and transitions:
  - using transitions (wipes, dissolves, fades), including editing transition parameters
  - keyframing effects, including scale and opacity.
- Editing sound:
  - editing with multiple audio tracks
  - synchronise audio and video tracks
  - cutting to soundtrack.
- Adding titles:
  - rolling and crawling titles
  - adding graphic elements to titles.
- Exporting in appropriate formats.

B3 Using continuity and non-continuity editing techniques and conventions

- Purposeful application of editing techniques and conventions to create continuity, meaning, narrative and audience response.
- Continuity editing techniques and conventions:
  - seamless editing
  - cutaways and cut-ins
  - match cuts
  - 30-degree rule
  - Shot/reverse shot
  - 180-degree rule
  - eyeline matching
  - cross-cutting
  - parallel editing
  - flashbacks.

- Non-continuity editing techniques and conventions:
  - o jump-cutting
  - o montage
  - o purposeful breaking of rules of continuity editing.
- Editing techniques and conventions which may be used for continuity or non-continuity editing:
  - o use of juxtaposition
  - o freeze frame
  - o slow motion
  - o split screen.

Learning aim C: Create a digitally edited sequence for a specific purpose

C1 Producing an edited sequence

- Deciding on a final direction to meet the requirements of the brief.
- Clarifying the constraints, including length of sequence.
- Managing resources effectively.
- Storage and folder management of original footage.
- Importing and organising clips.
- Selecting clips.
- Checking clips for technical or continuity faults.
- Producing a rushes log.
- Scheduling and production milestones.
- Setting up a sequence in an appropriate format.
- Stages of editing.
- Producing an edit decision list.
- Refining the edited sequence from rough cut to final cut.
- Select and use appropriate tools, techniques and conventions to create the intended impact on the audience.
- Exporting the final sequence in an appropriate format.
- Appropriateness of the tools, techniques and conventions used.
- Suitability for and fulfilment of purpose, including meeting the constraints of the brief.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand the techniques and applications of editing for film and television		
A.P1 Explain the types, purposes and functions of editing for film and television. **A.P2** Explain how meaning is created in one genre of film or television programme through the different applications of editing techniques.	**A.M1** Analyse how meaning is created through the application of editing, techniques for different editing types, purposes and functions.	**A.D1** Evaluate the effectiveness of different editing techniques applied for different purposes in fulfilling their intended purposes.
Learning aim B: Explore the use of editing tools, techniques and conventions for a specific purpose		
B.P3 Appropriately select and use digital editing tools to create test sequences in response to a brief. **B.P4** Apply appropriate continuity editing techniques and conventions within a test sequence in response to a brief. **B.P5** Apply appropriate non-continuity editing techniques and conventions within a test sequence in response to a brief.	**B.M2** Effectively select and use digital editing tools to create test sequences in response to a brief showing technical competence. **B.M3** Effectively experiment with continuity editing techniques and conventions to generate test sequences in response to a brief. **B.M4** Effectively experiment with non-continuity editing techniques and conventions to generate test sequences in response to a brief.	**B.D2** Consistently demonstrate an individual, creative approach and accomplished technical skills when using editing techniques and tools to develop different ideas for an edited sequence for a specific purpose.
Learning aim C: Create a digitally edited sequence for a specific purpose		**C.D3** Produce a technically and creatively accomplished final edited sequence that fully meets the intended purpose, justifying the choices made throughout.
C.P6 Apply appropriate editing techniques to produce a final edited sequence for a specific media purpose.	**C.M5** Apply effective editing techniques to produce a final edited sequence that meets the intended purpose.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.P4, B.P5, B.M2, B.M3, B.M4, B.D2)

Learning aim: C (C.P6, C.M5, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- digital video cameras
- computers and appropriate video-editing software
- the internet.

An appropriate range of clips may be provided for learners to select from or these may be generated as part of a different unit.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will select different examples of editing techniques that have been used for different purposes and evaluate these purposes, explaining them accurately. For example, learners might use an example from a murder mystery drama in which multiple flashbacks are used from the point of view of different characters, encouraging viewers to empathise with these characters, but each flashback shows only part of the narrative, deliberately withholding information to keep the viewer in suspense until the killer is revealed. Learners must then evaluate how successfully this intended purpose has been achieved by means of these techniques, for example they may comment that the overuse of flashbacks made the narrative difficult to follow. Examples must be chosen to illustrate the points made, and where appropriate, comparison should be made between the two, for example learners might show how a particular sequence of D.W. Griffith's early use of parallel editing in *Way Down East* (1920) could be compared with the later more sophisticated use in *Silence of the Lambs* (1991), where the narrative initially perceived by the viewer is subverted by means of the technique.

For merit standard, learners will select different examples of editing for film and television techniques used for different purposes and analyse these purposes, using examples to explain them accurately. The explanation of these purposes is likely to be less sophisticated than at distinction level, for example learners may identify a sequence where flashbacks are used to build suspense and finally to reveal the killer, but may not comment in relation to withholding information or empathising with the characters. Learners will make comparisons between examples, but will not necessarily comment in relation to how successful they have been in fulfilling their purpose.

For pass standard, learners will explain some of the different types, purposes and functions served by editing for film and television. Learners will use examples to do this, although these examples may not clearly exemplify the points being made. Examples will be used to show the development of techniques, for example learners may show examples of montage used in *Battleship Potemkin* (1925), *Rocky* (1976) and *Team America* (2004), but there is unlikely to be any substantial comparison between them or analysis of their different purposes.

Learning aim B

To fulfil this learning aim, assignments may be linked with other units and set to specify different purposes for test sequences using different types of editing. For example, learners could be required to create test sequences for a single camera drama using continuity editing techniques and a music video, advertisement or intro sequence using non-continuity editing techniques. Alternatively, the assignment may require learners to use different techniques in the same media product, but in this case, care should be taken to ensure the assignment gives sufficient guidance to learners as to the ways in which the product may contain sequences using both continuity and non-continuity editing techniques.

For distinction standard, learners will analyse the requirements of the assignment brief and define or clarify the specific purposes they intend to fulfil through the final edited sequences. They are likely to demonstrate a degree of complexity or sophistication in doing so and will go beyond the obvious. For example, rather than simply stating, 'using flashbacks to create a feeling of suspense in the viewer', they may refer to a number of interrelated purposes, or the stated purpose may require creative use of a combination of different conventions and techniques. Learners will use both continuity and non-continuity editing techniques and experiment with combinations of different techniques, tools and conventions to achieve their purpose. For example, when going into a flashback sequence for a murder mystery – different transitions, use of black and white footage, use of a montage of shots to achieve a 'fast rewind' effect through the events following the murder, split screen to show the different viewpoints of the killer and victim, and combinations of these might all be tried and several test sequences will be generated. The experimentation with techniques will be logged by learners in detail and annotated to give reasons for trying the techniques, and the success of the outcome. Learners may show sophisticated analysis of the creative ways in which they have used the techniques, or may make comparisons of their own work to that of historic or contemporary film-makers and how the techniques have been influenced by these, rather than copied from them. The log must also document in detail how they have used editing tools to achieve the techniques, and will go into the specifics of how each tool has been used, including information about the settings of the effects and transitions tried. For example, learners might write that they applied a Colour Balance (HLS) effect to desaturate an image to 80%. This could be documented by a sequence of annotated screenshots or by using screen capture software with a voiceover.

For merit standard, learners will define or clarify the specific purposes they intend to fulfil through the final edited sequences but the explanation will be less detailed than at distinction standard. For example, learners might state, 'Jump-cuts were used to break continuity and generate a feeling of paranoia in the viewer.' They will experiment with both continuity and non-continuity editing techniques (these may be limited in breadth) and different test sequences will be generated with significantly different use of techniques in each. Learners will log their experimentation with techniques and reference may be made to the work of film-makers; it is likely that learners will demonstrate how they have attempted to emulate existing work rather than showing how they have been influenced by it. The log will also document how they have used editing tools to achieve the techniques, and will discuss all the tools used, but may not go into the specifics of the settings of the effects and transitions tried. For example, learners might write that they faded from a colour to greyscale image by using the Colour Balance (HLS) saturation settings.

For pass standard, learners will give basic clarification of the purpose stated in the assignment brief. For example, they might state that the sequence will be designed to scare the viewer. Learners will use both continuity and non-continuity techniques to try to achieve their aims but these are likely to have been applied derivatively and without much experimentation. The techniques used may not always be successful in achieving the stated purpose, and there may be little or no comparison between techniques used. Learners will document how they have used editing tools to achieve the techniques, but the log of this will be descriptive and may lack detail, or will focus on the effects rather than on the specific tools used to achieve this, for example, 'I changed the clip to greyscale.' Observation records might support learners' use of tools but would be insufficient evidence on their own.

Learning aim C

For distinction standard, learners will compare the test sequences produced and clearly justify the reasons for selecting the final techniques to be used and the creative influences considered in arriving at the final selection. They will generate the necessary paperwork before starting work on editing the sequence, which must include a storyboard or marked up script, evidence of checking and logging rushes and the selection of clips to be used, a schedule and an edit decision list. Learners will manage their time and resources effectively and evidence this in a production log which will also document the processes used throughout editing of the sequence and the reasons behind all creative and technical decisions taken. The log will show how learners have made effective use of different stages of editing to refine a sequence from rough cut to final cut, showing several stages of refinement, and care and precision evident in the final stages. The final sequence does not need to be longer than 2–3 minutes in length. It will either have a self-contained narrative, form part of a longer narrative piece, or will have a clear non-narrative purpose, and will clearly achieve its stated purpose. It will be exported in an appropriate format for its intended platform, for example for TV or a social media platform. Learners will analyse and justify the effectiveness of the creative and technical decisions they have made.

For merit standard, learners will compare the test sequences produced and document the reasons for choosing the final techniques to be used, although the thought process behind the selection may not be fully documented or arguments may rely on personal opinion. Learners will generate most of the necessary paperwork before starting work on editing the sequence. The paperwork must include evidence of checking and logging rushes and the selection of clips to be used, and should also include a storyboard or marked up script, a schedule and an edit decision list. Learners will generally manage time and resources effectively, although there may be instances where elements are rushed or clips are misplaced or misnamed. Learners will document the processes used throughout editing of the sequence and the reasons behind all creative and technical decisions taken in a production log. The log will show how learners have refined a sequence from rough cut to final cut, but the log is unlikely to have the same level of precision and care as at distinction standard. The final sequence does not need to be longer than 2–3 minutes in length. It will either have a self-contained narrative, form part of a longer narrative piece, or will have a clear non-narrative purpose. The sequence will generally achieve its stated purpose but may be derivative or contain minor editing flaws. It will be exported in an appropriate format for its intended platform, for example for TV or a social media platform. Learners will review the creative and technical decisions they have made.

For pass standard, learners will summarise the reasons for choosing the final techniques to be used, although the thought process behind the selection may not be evident. There may be little or no comparison between techniques and arguments may be circular, for example, 'I chose these editing techniques to create an atmosphere of fear as they make the film look really scary.' Learners will document how they have selected clips from rushes, but there may be little checking of clips and reasons for selection may not be clear. They must also produce a storyboard or marked-up script before starting the final edit. Time management may be less effective and rushed processes or inefficient file structures may be evident. Learners will document the processes used throughout editing of the sequence and the creative and technical decisions taken in a production log, but the thought processes behind their decisions will not be made clear. Learners are likely to have created the final sequence in one stage without evidence of refinement from a rough cut. The final sequence does not need to be longer than 2–3 minutes in length. The sequence will generally achieve its stated purpose but the full context surrounding it may not be clear. The sequence is likely to be derivative of existing, professionally edited sequences and may contain editing flaws, but not to the extent that undermine its effectiveness. It will be exported so that it can be played, but may not be in a format fully appropriate for its intended platform, for example for TV or a social media platform. Learners will summarise the creative and technical decisions they have made, along with responses from members of the intended audience to make a judgement as to the suitability of the final sequence for purpose.

Links to other units

This unit links to:

- Unit 10: Film Production – Fiction
- Unit 20: Single Camera Techniques
- Unit 35: Multi Camera Techniques.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:

- guest speakers
- opportunities to visit suitable exhibitions.

Unit 22:   Interviewing Techniques

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

This unit gives learners the opportunity to develop the skills and understanding required to conduct interviews effectively for a range of media purposes.

Unit introduction

The ability to ask a question and to listen to the response are core skills of interviewing. The information gathered can go into a variety of formats, newsprint, online, or be featured on radio or television programmes. Developing an understanding of interview techniques can improve the interviewer's ability to conduct effective, successful interviews for realistic purposes.

In this unit, you will develop an understanding of the interview techniques used by others and put your own skills in to practice, gaining first-hand experience of this often complex but rewarding process. You will focus solely on the media industry practice of interviewing individuals for research or presentation purposes in order to gain information, opinions, or a better understanding of a topic.

You can apply the skills you develop in this unit to interviews for a range of different purposes in the digital creative media sector and it will be beneficial for your progression to employment or higher education.

Learning aims

In this unit you will:

A Understand interview purposes and techniques

B Prepare interviews for identified purposes

C Carry out interviews for identified purposes.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand interview purposes and techniques	**A1** Journalistic contexts **A2** Interview techniques **A3** Purposes of interviews	All research notes. Presentation slides and notes. Recording of presentation.
B Prepare interviews for identified purposes	**B1** Purpose of preparatory research **B2** Placement of content **B3** Interview planning and structuring **B4** Preparation for interview	Annotated, compiled research portfolio. Research log detailing activities and references for all materials gathered. All planning documentation. Word processed preparation reports for each interview with appropriate appendices.
C Carry out interviews for identified purposes	**C1** Conducting the interview **C2** Recording interviews **C3** Edit into sector	Recorded interviews. Annotated and updated preparation reports.

Content

Learning aim A: Understand interview purposes and techniques

A1 Journalistic contexts

- Print.
- Television.
- Radio.
- Online.
- News.
- Sport.
- Feature writers.
- Editorial.

A2 Interview techniques

- Question types:
  - open
  - closed
  - single
  - multiple
  - direct
  - suggestive.
- Interview styling, such as:
  - hard news
  - combative
  - light-hearted
  - entertainment
  - investigative
  - promotional.
- Structuring:
  - introduction
  - developmental questions
  - confidence building
  - key questions
  - soundbites
  - summary
  - wind-up.
- Communication skills:
  - building rapport
  - active listening
  - body language.
- Telephone interview techniques:
  - gathering information
  - obtaining comments.

A3 Purposes of interviews

- Research.
- Enhancement of audience understanding.
- Informational
  - o presenting information.
- Interpretive
  - o expressing or explaining opinion.
- Justification.
- Accountability.
- Emotional.
- Allowing audience an insight into a situation.

Learning aim B: Prepare interviews for identified purposes

B1 Purpose of preparatory research

- Identify key facts about a topic.
- Identify potential issues.
- identify potential areas of interest.
- Highlight areas of interest or concern surrounding a topic.
- Identify relevant matters in an interviewee's background.
- Observe or read previous interviews.
- Establish key facts and dates about a topic.
- Themes surrounding interviewee:
  - o issues or products interviewee is involved with
  - o previous activities of interviewee
  - o response of others surrounding issue or product
  - o comments of others regarding the interviewee.

B2 Placement of content

- Lifestyle magazine article.
- Lifestyle television or radio programme article.
- Television or radio documentary.
- Children's news website.
- Commercial blog.
- Local television news.
- National radio news.
- Reality television contestants.

B3 Interview planning and structuring

- Location.
- Date and time.
- Appropriate setting.
- Recording methods.
- Ambient considerations.
- Talent liaison considerations.
- Requirements of interview.
- Question formulation.
- Scripting of interviewer input.
- Consideration of interview style.
- Definition of structural progression – introduction, progressive questions, summary.

B4 Preparation for interview

- Client liaison.
- Talent management dealings – agreements, interview question previews, preparatory press briefings.
- Editorial compliance – fair dealing with contributors, gaining consent, copyright issues.

Learning aim C: Carry out interviews for identified purposes

C1 Conducting the interview

- Follow structure when interviewing subject.
- Take back-up notes.
- Ensure required information has been gathered.
- Wind up session with interviewee.

C2 Recording interviews

- Using technology appropriate to medium.
- TV, film and print
  - o Dictaphone™
  - o mini-disc
  - o video camera.
- Online/interactive
  - o webcam
  - o live link up.

C3 Edit into sector

- Timing.
- Word count.
- Space.
- Editing.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand interview purposes and techniques		**A.D1** Justify techniques used by professional interviewers and their different purposes using comprehensive examples with consistent use of correct terminology.
A.P1 Explain techniques used by professional interviewers for different journalistic context with appropriate use of terminology. **A.P2** Explain the different purposes of interviews with appropriate use of terminology.	**A.M1** Analyse techniques used by professional interviewers using illustrative examples with detailed terminology. **A.M2** Analyse the different purposes of interviews with appropriate use of terminology.	
Learning aim B: Prepare interviews for identified purposes		**B.D2** Comprehensively prepare and design interviews for identified purposes to a quality that reflects near professional standards, working independently to professional expectations.
B.P3 Plan competent interviews for identified purposes. **B.P4** Design competent interviews for identified purposes.	**B.M3** Plan effective interviews for identified purposes. **B.M4** Design effective interviews for identified purposes.	
Learning aim C: Carry out interviews for identified purposes		**C.D3** Carry out and produce interviews for identified purposes and within the context of at least two different mediums, to a quality that reflects near-professional standards working independently to professional expectations.
C.P5 Carry out competently interviews for identified purposes. **C.P6** Produce competently interviews within the context of at least two different mediums.	**C.M5** Carry out effectively interviews for identified purposes competently. **C.M6** Produce effectively interviews within the context of at least two different mediums.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim A: (A.P1, A.P2, A.M1, A.M2, A.D1)

Learning aim B: (B.P3, B.P4, B.M3, B.M4, B.D2)

Learning aim C: (C.P5, C.P6, C.M5, C.M6, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- a range of different media products such as television and radio recordings, magazine articles, newspaper articles, and research facilities
- equipment to record their interviews depending on the purpose of their interview.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will show an excellent understanding of the techniques that can be employed, where and when they are appropriate, and their strengths and limitations. Points made will be justified with supporting arguments and with reference to detailed and well-chosen examples. In the examples they give, learners will make clear why any given technique has been employed, and the effect it has on the quality of the final interview. Learners will draw out of an example, precisely what it is about it that exemplifies the point it illustrates. Technical vocabulary will be secure and used correctly and confidently at all times.

For merit standard, learners will analyse interview techniques and the different purposes of interviews, saying where and why these interview techniques and purposes are employed, showing that they understand the motives behind the techniques and the different interview purposes. This will be supported by reference to particular examples, but learners may not fully explain them to show how they illustrate the points being made. Learners will use technical vocabulary correctly most of the time, but may make occasional mistakes or be less secure about usages.

For pass standard, learners will explain the main interview techniques clearly, such as choice of question types, interview styles and use of tone or pitch. Learners will also explain the different purpose of interviews. All aspects of the explanation will be accurate, relevant and covered substantially and completely. Evidence will show a reasonable understanding of technical terminology and although learners may make occasional mistakes when they do use it, there is evidence of an understanding of all key techniques and their purposes.

Learning aim B

For distinction standard, learners will present a body of research that demonstrates a clear focus on the requirements of their intended interviews and a highly focused understanding of the value of research. Research will be from wide-ranging and imaginative sources, showing an intelligent approach to finding information and a developed understanding of the nature of interview techniques. Learners will describe the purpose of the interview fully by referencing a range of clearly defined examples from current and past practice. The structure of the proposed interview will be clear, and the phrasing and organisation of the questions will give the interview a sharp focus. Learners will demonstrate an excellent grasp of the requirements of interview planning and the value of planning and structuring the interview in advance. The language used will be clear, precise and in clear context.

For merit standard, learners will take a cohesive approach to research, building a collection of research materials that are appropriate and effective. Learners will have selected materials carefully that relate directly to the development of their preparations. Merit standard work will be of greater depth than at the pass level and reflect a good level of understanding of both the purpose and uses of solid and thoughtful research.

Learners will show clarity in their planning, providing detail about the nature and purpose of the proposed interviews. The structure and focus of the interviews will be clear and the questions appropriate and well written, with clarity of expression. It will be clear from their work that learners have a good understanding of the need for careful, accurate planning and have defined goals and purposes.

For pass standard, learners will present some basic research into the theme or subject of the interview they intend to conduct. While it will be appropriate, it may not be highly detailed but should be relevant. It will show that learners have some ability in assessing what information they may need to conduct their interviews and how to source this. Learners will be aware of the eventual use and context of the interviews that they intend to conduct. They will outline the intended structure of the interview, including a breakdown of questions that shows some understanding of industry practices. The language used may occasionally be unsophisticated but should be appropriate to the context and purpose of the interview.

Learning aim C

For distinction standard, learners will consider all aspects of the interviews and will conduct themselves with confidence and a professional approach when dealing with their interviewee. The interview will follow a well-thought out structure and be appropriate at all times in terms of purpose and context. Learners will have a thorough grasp of the techniques used by interviewers and also be able to implement them in their own practice. The interviews will have a clear structure and focus, and run fluently without padding or 'dead-spots'.

Learners' work will exhibit near-professional quality throughout, this means that skills are beginning to approach the professional standard and they are comparable to professional work. Distinction standard learners will be capable of working autonomously and effectively and on their own initiative.

For merit standard, learners will conduct interviews effectively, speaking confidently in order to achieve the goal of the interviews, as identified in their plans, and will succeed in using the structure they have built to interview their subject. The interviews may occasionally lack a crisp pace or may have the very occasional 'dead-spot'. Learners will generally show ability and some confidence in relation to skills and techniques. Work will be approached methodically and with clear preparation, ideas will be worked out and presented neatly. Processes will be undertaken with care and, generally speaking, thought will be put into the work. Learners will need little assistance, other than when trying to apply more sophisticated techniques.

For pass standard, learners will conduct the interviews, but may not be fully secure during their delivery (leading to possible 'dead-spots' in the interviews). They may occasionally stray from the planned structure or not fully achieve all of their intentions. The interviews will have been achieved through the application of relevant skills and techniques but they may occasionally lack a clear sense of purpose or focus. Learners may sometimes require some assistance and support, although they will take note of and make use of this help when it is given.

Links to other units

This unit links to:
- Unit 11: Radio Production – Fiction
- Unit 16: Factual Production
- Unit 17: New Production
- Unit 26: Writing Copy
- Unit 39: Live Radio Broadcasting.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:
- guest speakers and interview opportunities
- opportunities to visit suitable exhibitions.

Unit 23:   Stop Motion Animation

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners will examine the processes used in stop motion animation and will develop, film and post-produce their own animation using, industry techniques.

Unit introduction

Stop motion animation is a creative method for realising and expressing ideas and concepts used in many sectors of the creative media industries, including feature films, advertising, music video and TV.

In this unit, you will examine the stop motion animation industry, as well as developments that have advanced the methods and techniques used in creation and production. Your investigations will inform your own creative skills and experience to plan, prepare and develop your own animation. You will produce and edit your own stop motion animation with a soundtrack.

The knowledge, skills and experience that you gain during this unit, will give you an insight into the world of stop motion animation, along with transferable creative media production skills. You will be able to make informed decisions about potential routes into the animation industry for employment, training, higher education study or your own creative exploration.

Learning aims

In this unit you will:

A Understand the characteristics and processes of stop motion animation

B Generate materials for a stop motion animation

C Produce a stop motion animation for a digital media product.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand the characteristics and processes of stop motion animation	**A1** The processes for creating stop motion animation **A2** The characteristics of stop motion animation	Blog detailing the types, uses, purpose, history and key practitioners, of stop motion animation. Case study investigation, analysing the processes used in stop motion animations.
B Generate materials for a stop motion animation	**B1** Audio-visual development **B2** Generate materials for stop motion production	Portfolio or sketchbook with images.
C Produce a stop motion animation for a digital media product	**C1** Filming stop motion animation **C2** Post-production techniques	Filmed animation and post-produced stop motion animation with sound.

Content

Learning aim A: Understand the characteristics and processes of stop motion animation

A1 The processes for creating stop motion animation

- Visual development, e.g. narrative development, storyboarding, treatments and pitches.
- Frame rates required to create a smooth illusion of motion: 12 fps animation, 24 fps film, 25 fps television.
- Technological developments, e.g. use of 3D printing.
- Model making techniques, e.g. armature, sculpting, 3D printing.
- Set building and lighting.
- Audio production for animation, e.g. musical score, sound effects, voice over.
- Editing of footage, titles and credits to a soundtrack, using video and sound editing software.

A2 The characteristics of stop motion animation

- Purpose:
  o educate
  o entertain
  o inform.
- Uses and audience:
  o feature films
  o advertising
  o TV
  o music videos.
- Types:
  o claymation
  o found objects
  o time-lapse
  o cut-out
  o brick animation
  o puppet animation
  o pixilation.
- History of the development of animation:
  o the magic lantern
  o phenakistoscope.

Learning aim B: Generate materials for a stop motion animation

B1 Audio-visual development

- Creating an appealing design for characters/subjects/objects.
- Archetypes and stereotypes.
- Contrast between characters, use of exaggeration.
- Expressions, blinks, lip sync.
- Character/subject/object movement, weight, timing, walk, run, jump, skip, fly.
- Character/subject/object construction, armature, costume, colours, hair, skin.
- Dialogue, accents, emotion, picture and sound sync.
- Structure, e.g. narrative/surrealist/abstract structure. Set-up story (introduce characters and location – status quo), catalyst, crisis/conflict, climax, resolution. Alternative narrative structures.
- Evoking an emotional response from your audience.
- Points of view, camera angles and composition.

B2 Generate materials for stop motion production

• Writing process, e.g. research, ideas (brainstorming characters/objects, background, setting), outline for structure and plot points, writing treatment, scene breakdown, script, review and re-write.

• Building, painting and decorating sets and backgrounds.

• Constructing models and props.

• Developing characters/subjects/objects in preparation for movement, e.g. armature, eye stages for blinks, mouth stages for speech.

• Sourcing materials.

• Copyright and permissions.

• Music.

• Sound effects.

Learning aim C: Produce a stop motion animation for a digital media product

C1 Filming stop motion animation

• Setting up cameras.

• Lighting on set.

• Securing cameras and sets during filming.

• Framing, camera angles, 'movement', following the storyboard.

• Animating objects and capturing movement.

• Recording dialogue and other audio.

• Ensuring continuity.

C2 Post-production techniques

• Importing of footage and audio files to film editing software.

• Editing of footage and sound.

• Editing methods and techniques.

• Editing sound, e.g. musical score, dialogue, sound effects.

• Creating titles and credits.

• Exporting completed animation to appropriate files.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Understand the characteristics and processes of stop motion animation		**A.D1**	Evaluate the characteristics and processes used when creating different types of stop motion animation to appeal to different audiences.
A.P1 Explain the processes used to create stop motion animation. **A.P2** Explain the characteristics of different types of stop motion animation.	**A.M1** Analyse the characteristics and processes used when creating different types of stop motion animation.		
Learning aim B: Generate materials for a stop motion animation		**B.D2**	Refine the development of audio/visual materials and components to comprehensively prepare for the production of a stop motion animation.
B.P3 Develop audio/visual materials for a stop motion animation.	**B.M2** Develop effectively sourced and prepared audio/visual materials for a stop motion animation.		
Learning aim C: Produce a stop motion animation for a digital media product		**C.D3**	Produce a creative stop motion animation that targets specific audience through sophisticated application of post-production techniques.
C.P4 Produce a stop motion animation for a specific audience. **C.P5** Use post-production techniques to appropriately animate and film a stop motion animation.	**C.M3** Use post-production techniques to effectively animate, film and edit a stop motion animation to meet the intended purpose.		

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.M2, B.D2)

Learning aim: C (C.P4, C.P5, C.M3, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to software and equipment required for stop motion animation production:

- computers
- motion image capture software
- image manipulation (e.g. Adobe Photoshop®, Adobe After Effects®)
- camera, graphics tablet.

Other resources may include craft materials, tools and modelling clay, such as Newplast.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will clearly document and reference their research. In their exploration of the characteristics of stop motion animation they will analyse, examine and evaluate in detail, historical developments and their impact, referring to inventors of relevant technologies. They will provide detailed research findings and discussion, examining the early pioneers of stop motion animation, analysing and evaluating their work. The type and purpose of the animations studied will be accurately identified by learners, with specific references to their features. Their examination of the process of stop motion animation will refer to well-referenced and detailed examples of current practice. There will be an understanding of the whole process of creating a stop motion animation from start to finish, with learners accurately detailing the creation of more than one type of animation, from narrative development to post-production editing. This will be evidenced through detailed case studies. Learners will analyse and evaluate a range of examples, examining their uses and purposes in detail. There will be detailed analysis of how visual and narrative elements have been created, to appeal to the audience fulfilling the purpose of the animation. Examination of professional practice in terms of industry conventions, will critically analyse and evaluate the development and use of narrative, storyboards, treatments and pitches, with reference to specific examples. Presentation of these research findings will be sophisticated and professional, including relevant, captioned illustrative imagery and a detailed bibliography.

For merit standard, learners will provide referenced documented research. Learners must analyse at least two different types of stop motion animations, for example, a puppet animation and a claymation. The analysis of the processes used to create these two different animations will be detailed and mainly accurate, although there may be less consistent depth of analysis than for distinction standard. Learners will analyse the characteristics of their two chosen animations. Examination of professional practice in terms of industry conventions will critically analyse the development and use of narrative, storyboards, treatments and pitches, with reference to specific examples. Presentation of these research findings will be of a professional standard, including relevant, illustrative imagery and a bibliography.

Learners will analyse and examine in detail historical developments of their chosen stop motion animations, referring to inventors of relevant technologies. They will provide detailed research findings, examining the early pioneers of stop motion animation and analysing their work. Their examination of the process of stop motion animation will refer to well-referenced and detailed examples of current practice. They will analyse a range of examples, examining their uses and purposes.

For pass standard, learners will produce referenced documented research. In explaining the characteristics of stop motion, they will demonstrate an understanding of historical developments in stop motion animation, including relevant technologies. They will provide research findings, referring to early pioneers of stop motion animation and their work. Learners will describe how the characteristics of the animation work fulfil its purpose, although it is likely that learners will not go beyond recognition of the most obviously appealing characteristics. For example, learners may write, 'The use of claymation, and the simple narrative structure of the Aardman films help to make them appealing entertainment.' Their examination of the process of stop motion animation will still need to cover the whole process from start to finish, although it is likely that there will be inconsistencies in the level of detail for each part of the process (for example, there will be more written about how the figures are constructed and less on the development of the narrative). They will include examples of current practice. Learners will identify a range of examples, broadly, rather than in detail, examining their uses and purposes. Examination of professional practice in terms of industry conventions will include the use of narrative, storyboards, treatments and pitches. Presentation of these research findings will be of a basic standard, including imagery and references.

Learning aim B

For distinction standard, learners will produce detailed and imaginative planning that demonstrates thorough consideration of movement, continuity and lip-synching, where appropriate. They will demonstrate that they have made careful consideration to producing a well-developed narrative that will show sophistication through the construction of a non-conventional structure, or the nuanced plot of a traditional narrative. Careful consideration will be given to points of view, camera angles and composition. Consideration of main character(s) and set design will include planning and examination of relevant aspects in detail, including construction methods and techniques. Narrative development will be detailed and follow industry standard conventions. Storyboards and/or animatic will show a clear, accurate and detailed breakdown of the intended animation, including lighting, camera angles, shot types and consideration of sound, including dialogue, music and effects where relevant. Some, or all of the audio/visual materials and components will have been refined by learners to improve the preparations. For example, learners may make alterations to a character or change elements of the set, and justify these changes in terms of improving the aesthetic and narrative. There may also be planning for the inclusion of special effects.

For merit standard, learners will produce detailed planning that demonstrates consideration of movement, continuity and lip-synching where appropriate. They will demonstrate that they have produced a developed narrative; consideration will have been given to points of view, camera angles and composition. Character and set design will include planning of relevant aspects in detail, including construction methods and techniques. Narrative development will follow industry standard conventions. Storyboards and/or animatic will show a detailed breakdown of the intended animation, including camera angles, shot types and consideration of sound. Overall, the preparations of the audio/visual materials and components will be of a standard that will allow for the production to proceed without difficulties. For example, the sets and characters are well prepared and do not need to be continually fixed, the narrative is fully developed and ready to be translated to a recording.

For pass standard, learners will demonstrate that they have designed characters and developed a narrative for their animation. Consideration will have been given to points of view, camera angles and composition. Designs will include planning of relevant aspects, including construction methods and techniques. Storyboards and/or animatic will show tails of the intended animation, including camera angles, shot types and consideration of sound. There are likely to be inconsistencies in the level of detail given across the planning, and there may be planning and preparation considerations learners have forgotten and have to later do 'in situ'. Overall, there will be evidence of sufficient sourcing of materials and preparation of characters, setting and narrative for filming to begin.

Learning aim C

For distinction standard, learners will produce a completed animation (maximum duration of three minutes including/excluding credits and titles) that shows few if any technical errors, full details of comprehensive preparation of characters and sets, referring to their planning in the construction. Learners will demonstrate accomplished practical skills through their use of cameras, lighting and post-production tools. Full consideration of the movement of characters will be made. This may be demonstrated by including armature and stages for facial expression and speech, where applicable. Animation sets will demonstrate creativity in their execution, with attention to detail enhancing the overall aesthetic; sets will be constructed securely and lighting controlled well. Shots will be taken in ones or twos (single or double frame), to create smooth movement on playback at 24 frames per second. The illusion of movement will have been well executed and sound editing such as lip-synching, established with very few errors. Production will be well organised and time-managed. Sound effects, musical score, narration and dialogue may be specifically recorded for the production, with soundtracks being very well synchronised in editing. Reference will be given to the storyboard and/or animatic, as well as other planning throughout shooting and consideration given to continuity. Appeal to the target audience will be evident in both micro and macro elements of the production and is likely to be continued through to the titles and credits. These may form part of the animated sequence or be added at the editing stage, and will complement the tone and feel of the overall piece.

For merit standard, learners will use post-production techniques to produce a completed animation effectively, following and largely meeting the intention outlined at the planning stage, although there may be some aspects that are not fully realised (for example, the intended facial expressions for a character in the planning stage may not be produced exactly as intended). Learners will demonstrate effective preparation of characters and sets, referring to their planning during construction and ensuring these elements work mainly as planned, during the production and post-production stage. Consideration of the movement of characters will be made. Animation sets will be constructed securely and lighting controlled. Shots will be taken in ones or twos (single or double frame) to create smooth movement on playback at 24 frames per second. When edited the movement in the animation will be smooth and soundtracks well synchronised although there may be some errors. The soundtrack may include more than one track such as effects, musical score, narration and dialogue. Reference will be given to the planning throughout production and consideration given to continuity.

For pass standard, learners will produce a completed stop motion animation, edited with a soundtrack in response to requirements of a specific audience. They will create characters and sets in preparation for filming; although these may not be finished to a high standard, they will be of a good enough quality to be manipulated and moved during production and post-production as required, to allow for the completion of the animation and for the narrative to be coherent. Sets will be secured and lighting controlled. Movement of characters and/or elements of the animation will be established during filming, although it is likely that adjustments will have to be made during the production and post-production process to correct mistakes. Sound will be appropriately edited to the animation footage, although there may be imperfections in its insertion into the piece.

Links to other units

This unit links to:

- Unit 33: 2D Animation
- Unit 36: Lighting Techniques
- Unit 38: Visual Effects
- Unit 43: 3D Digital Animation.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:

- guest speakers
- opportunities to visit suitable businesses.

Unit 24: Sound Editing

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners will develop the practical skills required to edit digital sound recordings and complete the editing of pre-recorded digital sound files.

Unit introduction

When sound is digitally recorded it often needs to be edited, 'cleaned up' in order to make it useable, whether for a television or radio programme, a film, for inclusion as web content, or as the soundtrack of a computer game. Sound, when accompanying a visual image, such as a TV programme, film, web page or game play, often does not receive the same attention to quality as the visual image.

In this unit, you will be introduced to the reasons for the need to edit pre-recorded digital sound files in WAV or AIFF format. You will become familiar with the range of techniques that are employed when editing digital WAV and AIFF sound files, along with the procedures and software for MAC and/or PC platforms used to complete the editing. The pre-recorded digital sound files that you will edit may be sound recordings that you have made yourself, as part of a television or radio programme, a film, a website or a computer game.

This is a skilled area in the media industry that demands practice and understanding of the background reasons, the techniques and procedures, and the actual craft that sound editors need to accomplish their role to a high standard. Progress to employment in the sound engineering industry is possible, as is developing the skills gained from this unit in higher education.

Learning aims

In this unit you will:

A Understand the reasons for editing factual and fictional recorded digital sound

B Investigate the equipment, techniques and procedures for editing recorded digital sound

C Edit recorded digital sound for media artefacts.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand the reasons for editing factual and fictional recorded digital sound	**A1** Reasons for the need to edit sound recordings **A2** Editing factual content **A3** Editing fictional content	A presentation, either written or verbal, about the reasons why it is necessary to edit digital sound recordings.
B Investigate the equipment, techniques and procedures for editing recorded digital sound	**B1** Sound-editing equipment **B2** Sound-editing techniques **B3** Sound-editing procedures	A presentation, either written, verbal or practical demonstration, of how to prepare appropriate equipment for editing digital sound recordings.
C Edit recorded digital sound for media artefacts	**C1** Prepare and import sound recordings before editing **C2** Complete the editing of digital sound material **C3** Review edited material, normalise and export for consumption	A completed series of edited recorded sound clips for inclusion in a digital media artefact or artefacts.

Content

Learning aim A: Understand the reasons for editing factual and fictional recorded digital sound

A1 Reasons for the need to edit sound recordings

- To compress and summarise a sound recording to fit a specific space.
- To eliminate flawed, repetitive, superfluous, uninteresting, irrelevant material from a recorded clip.
- To enable recorded speech to remain legal.
- To ensure any indecent or inappropriate language is edited out
- To change the chronological or logical order of a series of sounds or speech.
- To create impact by adding sound effects and/or music between pieces of recorded speech.

A2 Editing factual content

- Understanding the nature of sound for factual content and the need to reproduce sound material without changing any aspect of the original.
- Ethical editing of factual material to retain the essential intended meaning of the spoken word.
- Retaining ambient background noise of original recordings and paying attention to differences in background sound levels at edit points.
- News stories – location reports, studio presenter dialogue.
- Documentary – retaining the original intention and resisting the desire to introduce misrepresentation for the sake of continuity and polish, e.g. John Grierson's film *Drifters* (1929) or Alan Harper's film *Caller Herrin'* (1947), resisting the use in editing of studio generated footage.

A3 Editing fictional content

- Applying creative editing skills to produce dramatic sound that is acceptable to the director.
- Editing appropriate clips, links, background sound to enhance the dramatic effect on the audience, e.g. in a drama, soap, play.
- Apply the necessary level of creative storytelling to facilitate the narrative.
- Retaining ambient background to recordings and editing in spot effects to match directors' needs.
- Editing relevant sound clips for use in transitions between scenes.
- Editing voice actor dialogue for overdubbing to specific scenes.

Learning aim B: Investigate the equipment, techniques and procedures for editing recorded digital sound

B1 Sound-editing equipment

- PC or Mac platform.
- Ancillary equipment for use with the MAC workstation.
- MAC keyboard shortcuts and custom key labels.
- MAC compatible editing software.
- PC or Mac platform.
- Ancillary equipment for use with the PC workstation.
- PC keyboard shortcuts and custom key labels.
- PC compatible editing software.
- Standalone editors.
- Dedicated edit workstations with no other function than to edit digital sound clips.
- Multi-screen systems and converters (e.g. Matrox DualHead2Go).
- Stereo soundstage setup for editing versus use of stereo headphones.
- Converting sound bites from monophonic to stereophonic clips.

B2 Sound-editing techniques

- Selecting clips to be edited according to the needs of the media artefact.
- Cut and paste techniques for importing sound clips.
- Graphic manipulation of volume, pan (assigning to left or right of soundstage), level control.
- Onscreen fader control of volume levels.
- Use of keyboard shortcuts versus use of mouse, mousepad or trackball.
- Duplication copying and saving.
- Use of multiple screen add-ons.
- Use of breathing spaces in editing speech, pauses to replicate true essence of sounds.

B3 Sound-editing procedures

- Review procedures – reviewing recorded sound material before editing by listening to each clip and checking for errors and omissions, sound level issues, faults, poor recordings.
- Logging procedures while reviewing – listing each recorded clip and listing good clips and bad clips with a view to deciding which to use and which to discard.
- Importing into software, pre-recorded digital sound clips, e.g. AIFF or WAV from standalone recorders, use of dedicated MAC editing keyboard shortcuts, use of mouse over icons.
- Naming of clips and folders to ensure easy access and guard against loss of clips.
- Dragging or importing of selected clips to audio timeline in readiness for editing.
- Reviewing clips in light of needs of finished product.
- Inserting start and finish edit points and deleting unwanted audio.
- Merging and repositioning sound bites and edits to make a cohesive single edited clip in readiness for exporting back to folder bin before use in mixing finished product.
- Using normalising function to ensure that recorded level of each clip is the same with respect to full coding point.

Learning aim C: Edit recorded digital sound for media artefacts

C1 Prepare and import sound recordings before editing

- Log and review recorded material.
- Select clips to be edited.
- Import selected clips to workstation software bin.

C2 Complete the editing of digital sound material

- Produce edit list with timings.
- Edit each clip according to requirements.
- Export each clip to relevant storage device.

C3 Review edited material, normalise and export for consumption

- Review each edited clip in terms of sound quality, running time.
- Normalise and export each sound clip to a storage medium.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand the reasons for editing factual and fictional recorded digital sound		
A.P1 Explain the reasons for editing sound recordings. **A.P2** Explain the reasons for editing factual sound recordings. **A.P3** Explain the reasons for editing fictional sound recordings.	**A.M1** Analyse the reasons for editing factual sound recordings. **A.M2** Analyse the reasons for editing fictional sound recordings.	**A.D1** Evaluate, using a range of detailed examples, the reason for editing pre-recorded sound.
Learning aim B: Investigate the equipment, techniques and procedures for editing recorded digital sound		**B.D2** Evaluate, using detailed examples, digital audio editing equipment and justify the techniques and procedures used in producing professionally edited sound files.
B.P4 Explain the types of digital audio editing equipment used for editing digital sound files. **B.P5** Explain digital sound file editing techniques. **B.P6** Explain digital sound file editing procedures.	**B.M3** Analyse the types of digital audio editing equipment used for editing digital sound files. **B.M4** Analyse digital sound file editing techniques and procedures.	
Learning aim C: Edit recorded digital sound for media artefacts		**C.D3** Use relevant professional editing equipment, apply creative editing techniques to unedited sound material to produce specific edited sound clips that comply with appropriate codes and conventions of the selected genre.
C.P7 Produce unedited material for editing and document appropriately. **C.P8** Use relevant digital editing equipment, apply appropriate editing techniques and procedures to the unedited material, and comply with codes and conventions of the appropriate genre.	**C.M5** Use relevant digital editing equipment, apply editing techniques and procedures effectively to reviewed, unedited sound material to produce specific finished sound clips that comply with appropriate codes and conventions of the selected genre.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.P3, A.M1, A.M2, A.D1)

Learning aim: B (B.P4, B.P5, B.P6, B.M3, B.M4, B.D2)

Learning aim: C (C.P7, C.P8, C.M5, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- PC or MAC computers
- appropriate industry standard stereo digital editing software, or dedicated editing station
- means of copying/transferring digital sound files AIFF/WAV from portable recorders to editors in the digital domain.

Essential information for assessment decisions

Learning aim A

This unit is assessed internally by the centre and externally verified by Pearson.

For distinction standard, learners will fully justify their reasons for editing digital sound files and evaluate their explanations with suitably detailed examples. For example, learners might write, 'Most media artefacts, such as TV and radio programmes are produced to fit into tightly defined time slots in broadcast schedules. These timings must take reference from the need to include a range of other content between programmes, including trails, commercials, announcements and time signals. A news story will be edited to fit a specific time slot in a bulletin that could last anything from 3–27 minutes. The weather forecast even, must always be no more than 54 seconds in the given slot.' The distinction answer will approach the reasoning for the need to edit sound in a logical and informed manner with well-illustrated examples of each of the reasons that are usually associated with the need to edit sound.

For merit standard, learners will analyse the reasons for editing both factual and fictional digital sound media products. There will be a clear distinction between each type of media product. Understanding of the different reasons will be clear from the approach. For example, learners might write, 'Ethical editing in factual content, even if the need to reduce the running time of a clip is pressing, whereas in a fictional product, there is more flexibility with time, even if the overall running time is fixed, the need to ensure that a short scene is tightly timed is not as critical as with factual material. For example, the running time of a sound bite for a story in a news bulletin, taken from a politician's response to a question, may have a very limited run time but it is essential for meaning not to be altered, if the producer is to retain their reputation.'

For pass standard, learners will address each of the pass criteria with an appropriate but limited response. Reasons will be given for the need to edit pre-recorded digital sound files, but with little reference to anything other than the plain facts of the reasons. For example, learners might write, 'Editing sound is done to shorten a clip, or to take out sound that is not wanted, or to rearrange the order, etc. Editing in fiction is done to make the sound fit the action. Editing in factual programmes, like the news, is done to make sure that all stories are covered in the right amount of time.'

Learning aim B

For distinction standard, learners will produce a justification and an evaluation of the reasons for editing sound files in general. They will elaborate on the specific reasons for editing sound files for factual sound content and, using a range of detailed examples, the reasons for editing pre-recorded sound files to be used as backgrounds. Learners will include elaborated justifications for editing sound files for fictional sound products. For example, learners might write, 'When editing sound files for factual media products, it is essential that the factual dialogue content of the sound file or clip is not in any way altered, or the meaning changed from what was intended by the contributor. Misrepresentation of facts is both morally and, in some cases, legally wrong. Contributors can and have instigated litigation for being misrepresented as a result of unethical editing of their spoken words when broadcast on radio or television. On the other hand, editing dialogue for a fictional piece does not carry any potential litigation possibilities and is usually completed to remove erroneous material, enhance the dramatic effect, or simply shorten the delivered content to fit a given time slot.'

For merit standard, learners will analyse types of sound file editing equipment, by comparing the advantages of one type of editor to another. For example, learners might write, 'there are three fundamental platforms of editing device: PC, MAC and dedicated editors. The disadvantage of a standalone editor is that it can't be used for anything else other than editing, while both PC and MAC options support other software, particularly mixing software, which is what you would want to do after editing a number of sound clips.' In analysing editing techniques and procedures, learners might write, 'Pre-recorded sound files must be imported to the selected editing device and kept in a folder, before use. They should each be named in a logical manner to ensure nothing is lost. Parts of edited sound files that are not required may be deleted if the edit software works in that way. Some editing software keeps all clips that are deleted just in case you have deleted something by mistake. It is important to keep records of everything that you do.'

For pass standard, learners will probably explain in separate paragraphs the types of digital editing equipment, techniques used in editing and procedures for carrying out editing in a simple but factually correct manner. Language will be appropriate but there will not be significant use of complex language. The content will be straightforward and unambiguous. For example, learners might write, 'Sound file editing equipment is related to the type of computer used, either PC or MAC, but there are standalone editors that do nothing else but edit sound files. For sound editing you have to have the recorded files and then you put them into the computer, listen to them, and then make a marker at the start and the end of the bit you want to edit. Then you press the right key on the keyboard, or you highlight the bits to be edited, and press the right keys on the keyboard to delete them. Then you save the file to the folder.'

Learning aim C

For distinction standard, learners will apply creative editing techniques to the unedited sound material to produce a cohesive soundtrack for the product envisaged. What is produced will be specific, edited sound clips that move smoothly together. There will be no evidence of audible clicks or changes in background ambience and the artefact will comply fully with appropriate codes and conventions of the genre. Learners will justify edit decisions and explain in the form of a log, revisions made throughout the production process. An appropriately selected audience will listen to the piece and complete a questionnaire feedback on technical clarity and relevance of narrative content to the original subject matter. The edited piece will reflect full adherence to codes and conventions of the genre chosen.

For merit standard, learners will demonstrate a high-quality technical competence in ensuring that the recorded signal is clean and free from spurious noise and that sufficient breathing time has been allowed at each end of dialogue clips. Creatively, there will be evidence of effort being made, but there will be parts where the consistency of the piece is not quite fully realised. Documentation will be clear and will relate to the finished artefact.

For pass standard, learners will prepare and review the unedited sound clips for editing and document them appropriately, but there will be slight errors and omissions. Learners will apply appropriate editing techniques and relevant procedures to the unedited sound and there will be evidence of compliance with codes and conventions of the appropriate genre, but nothing more. Technical quality will be acceptable but not faultless, with minor sound level issues and perhaps ambient background levels changing. The narrative will be clear, but not highly creative, and there may be slight deviations to the adherence to codes and conventions of the genre.

Links to other units

This unit links to:

- Unit 11: Radio Production – Fiction
- Unit 25: Sound Recording.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:

- guest speakers
- opportunities to visit suitable exhibitions.

Unit 25: Sound Recording

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners will explore the theory and practice of sound recording, both in interior and exterior environments, and record their own examples of soundtracks for identified purposes.

Unit introduction

The importance of recorded sound for media products is central to the complete understanding of the content. Sound, in the form of dialogue, creates mood, emphasis, tone and focuses the audience's attention on the action. Clarity and quality is vital for sound in all its applications.

In this unit, you will be introduced to theoretical concepts of sound recording, equipment used and the techniques to use it. You will look into recording challenges in interior and exterior locations and you will demonstrate your understanding by recording sound for a variety of purposes and set outcomes.

Sound recording is a fascinating and useful skill that will give you a solid foundation for employment in a number of media fields, radio, television, music recording, website audio and sound for computer games. The techniques you develop in this unit could be the skills that you choose to develop in higher education.

Learning aims

In this unit you will:

A Understand sound-recording equipment, techniques and technology

B Produce a portfolio of sound recordings that shows the effects of location and acoustics on recorded sound

C Produce recorded unedited sound in different acoustic settings.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand sound-recording equipment, techniques and technology	**A1** Signal paths and levels, audio file formats **A2** Microphone types, accessories, mount, applications, placement **A3** Sound recorders, connectors and connecting procedures	A report on sound-recording equipment, techniques and technologies (either written or audio visual).
B Produce a portfolio of sound recordings that shows the effects of location and acoustics on recorded sound	**B1** Principles of sound **B2** Interior location acoustics and considerations when recording sound **B3** Exterior location acoustics and considerations when recording sound	A portfolio of recordings demonstrating specific characteristics of recording different sounds in both interior and exterior locations. To be recorded and accompanied by either a voice-recorded commentary or a written report, providing evidence of learners' factual knowledge of what they have undertaken practically.
C Produce recorded unedited sound in different acoustic settings	**C1** Plan a sound recording event for a specified purpose **C2** Set up sound-recording equipment **C3** Record sound for a specified purpose **C4** Log recorded sound	Documentation showing preparation for sound recording.

Content

Learning aim A: Understand sound-recording equipment, techniques and technology

A1 Signal paths and levels, audio-file formats

- Audio signal paths, analogue, digital:
  - recording – sound, microphone (analogue), audio lead, recorder input, record pre-amplifier, analogue to digital convertor (ADC), recording medium (disc, SD card, hard disk drive (HDD)
  - replay – recording medium (disc, SD card, hard drive (HDD)), digital to analogue convertor (DAC), replay pre-amplifier, power/headphone amplifier, loudspeaker/headphones, sound.
- Sound levels:
  - replay levels – according to power of amplifier, taste and environment, decibels (db)
  - recording levels – sounds recorded at levels relative to each other, maximum record level, distortion, full coding, 0db, optimum record levels.
- Sound file formats and their applications in recording sound:
  - audio coding formats and audio codecs, METADATA
  - uncompressed file formats, broadcast wave format (BWF or BWav), PC standard, WAV, MAC standard, audio interchange file format (AIFF), AU, pulse-code modulation (PCM), compact disc digital audio (CDDA)
  - compressed lossless file formats – ATRAC (advanced lossless), Apple.m4a, MPEG-4, windows media lossless (WMA)
  - compressed lossy file formats – MP3, vorbis, ATRAC lossy, Windows (WMA) lossy.
- Mono and stereo recording and replay:
  - recording a mono sound signal
  - recording a stereo sound signal, sound stage, coincident crossed-pair microphones
  - replaying a mono sound recording
  - replaying a stereo sound recording.

A2 Microphone types, accessories, mounts, applications, placement

- Microphone types – mono:
  - construction – capacitor, condenser, RF condenser, electret condenser
  - dynamic, ribbon etc. design – polar response, omnidirectional, unidirectional, bidirectional, cardioid, hyper cardiod, (shotgun and parabolic), piezoelectric boundary (PZM), noise-cancelling.
- Microphone types – stereo, radio microphones, dual encapsulation.
- Microphone accessories:
  - mounts, floor stands, table stands, hand-held, camera mounted, lavalier, set mounted, boom/dolly mounted, windshields.
- Microphone use and acoustics:
  - vocals, speech, commentary, music, sound effects, ambient sounds
  - interior, exterior, reverberation (echo), crowds.
- Microphone applications in live recording:
  - vocal/voice, dialogue, commentary, lip-sync for film/television, spot sound effects, ambient sound effects.
- Microphone placement for recording:
  - distance from source of sound, bass tip-up/proximity effect, inverse square law.

A3 Sound recorders, connectors and connecting procedures

- Sound recorders (professional edition):
  o portable/battery operated, studio/mains operated applications – field/location recording, studio recording, interiors/exteriors, custom recorders, recording software for computers.
- Recording level measurement:
  o volume unit meter (VU), peak programme meter (PPM), peak signal level, tone, pitch, 0db.
- Sound signal levels:
  o terms used by recording engineers, low, medium, high impedance (ohms), input, output, line level, millivolts, monitoring using headphones, matching inputs to outputs.
- Frequency response curves:
  o microphones, inputs/outputs of recorders, Hertz, phase, pitch.
- Sourcing recording equipment, selecting, misuse of equipment.
- Connectors and cables – standard/mini mono/stereo mini jack male/female plug/socket XLR 3 pin male/female plug/socket connectors, RCA/phono male/female plug/socket.
- Connecting procedures for sound equipment for recording – recording in mono/stereo, monitoring sound recording levels, (on) headphones, loudspeakers, (feedback) basic mono, basic stereo, 3.1, 5.1, 7.1.

Learning aim B: Produce a portfolio of sound recordings that shows the effects of location and acoustics on recorded sound

B1 Principles of sound

- Speed of sound:
  o Doppler effect, sound radiation, behaviour of sound at different altitudes.
- Sound frequency, octaves, harmonics:
  o transmission of sound through various mediums, walls, glass, water, air.
- Reflection, refraction and absorption of sound waves:
  o reflection from hard surfaces, reverberation, echo
  o refraction in water
  o absorption into soft furnishings and people.

B2 Interior location acoustics and considerations when recording sound

- Spaces with soft furnishings – houses, living rooms, lounges:
  o sound insulation, absorption, properties, curtains, carpets, audience-filled auditoria, recording/radio studios.
- Spaces without furnishings – bathrooms, classrooms, halls, churches:
  o decay times of different spaces.
- Mechanical noise, pipework, fridges, freezers, boilers, creaking doors.

B3 Exterior location acoustics and considerations when recording sound

- Urban:
  o traffic noise, crowd noise in shopping centres, weather, use of windshields
  o intrusive noise from bystanders, crowd control
  o eliminating background noise, hyper directional gun microphones.
- Rural:
  o ambient countryside sounds, weather, use of windshields
  o unwanted sounds, aircraft, sirens, electricity pylons, distant traffic noise.

Learning aim C: Produce recorded unedited sound in different acoustic settings

C1 Plan a sound recording event for a specified purpose

- Purpose of recording (topic, programme), identifying contributor/sound to be recorded, identifying location of recording, contact documentation, pre-recording documentation, list of sounds, questions to be asked, script to be recorded, permissions and clearances, stereo or mono, selection and sourcing of equipment, costing of hires, selection of recording format.

C2 Set up sound recording equipment

- Positioning of recorder, placement of microphone(s) with respect to sound source, ensuring contributor(s) is relaxed and ready to be recorded, conducting pre-recording test, ensuring batteries are fully charged and cables are safe (health and safety), recording, monitoring sound record levels using meter/bar graph, checking sound quality with respect to intrusive background noise using headphones.

C3 Record sound for a specified purpose

- Conduct recording, check recording(s) on replay for level and quality, rerecord if necessary, log recordings, ensure sufficient material has been recorded, thank contributor(s) if appropriate, return to base room.

C4 Log recorded sound

- Set up replay facility either on recording device or by transferring the sound file to a computer sound application, check sound log is accurate, review recordings for quality and level, select which takes will be used in final programme.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand sound-recording equipment, techniques and technology		
A.P1 Explain signal paths, audio levels and audio file formats used in digital sound recording. **A.P2** Explain the types of microphones and operation of sound recorders.	**A.M1** Analyse microphone equipment and techniques used in the recording of sound for a specified setting.	**A.D1** Evaluate types and uses of microphones used for two settings with different acoustics, using detailed examples and clear use of terminology.
Learning aim B: Produce a portfolio of sound recordings that shows the effects of location and acoustics on recorded sound		
B.P3 Investigate the impact of speed, frequency and refraction on sound. **B.P4** Carry out sound recordings in interior and exterior locations to record the impact of changes in acoustics.	**B.M2** Carry out sound recordings and explore the impact of changes in location and acoustics on the recording of sound in interior and exterior locations.	**B.D2** Evaluate the effects of frequency, pitch, reflection and absorption on the nature of sound recordings in interior and exterior locations, using detailed recorded examples and clear use of terminology.
Learning aim C: Produce recorded unedited sound in different acoustic settings		**C.D3** Refine the set-up of the recording equipment, microphone placement and levels to produce accomplished sound recordings in both interior and exterior settings.
C.P5 Plan appropriately for an exterior and an interior sound recording. **C.P6** Carry out production tasks to record audio competently in an interior and an exterior setting.	**C.M3** Plan effectively for an interior and exterior sound recording. **C.M4** Carry out production tasks to record clear audio in an interior and an exterior setting, selecting effective equipment.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.P4, B.M2, B.D2)

Learning aim: C (C.P5, C.P6, C.M3, C.M4, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- portable and fixed sound recorders capable of recording to industry standard file formats WAV/AIFF, not MP3 format
- a range of microphones – omnidirectional (for sound effects) and unidirectional (for speech), lavalier and hand-held construction
- recording media – SD card, flash drive.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will consider two different acoustic settings for sound recording, for example a church and a busy street, and provide detailed and accurate analysis of the microphone that would be best suited to use in that setting to achieve optimal sound recording quality. They will provide details of which accessories would be used by the sound recorder in setting up and using the equipment, and where specifically the microphone would be placed. Their choices will be appropriate for the two different settings, and learners will provide detailed justifications for their selections, showing a clear understanding of different microphone types, by construction, application and polar response pattern. They might write, 'The Shure SM58 is a workhorse microphone suitable for close vocal use. Its unidirectional response pattern, which minimises signal pickup from in front of the microphone, makes it ideally suitable for use on stage as a vocal mic.' Learners will refer to specific pieces of equipment by type and brand, as in industry.

For merit standard, learners will analyse the advantages of using a particular type of microphone, accessories and set up for the given setting. They will choose effectively and provide justification for this, demonstrating knowledge and understanding of the technical and operational aspects of the microphone, accessories and set up which make it suited for use in that setting. Learners will explain microphone types in terms of construction, particular uses, type and polar response, referring to them as in industry, by their brand and type number, for example an AKG C1000 is a omnidirectional, studio condenser microphone suitable for capturing acoustic instruments like classical guitar when mounted on a boom stand below and pointing at the sound hole, whereas a bass drum is best recorded using an AKG D12 or similar of more rugged construction.

For pass standard, learners will explain a signal path through a recording device from microphone to recording medium, and from recording medium to loudspeaker. They will use accurate terms and show an understanding of the need for an analogue signal to be converted to a digital signal in order to make its journey to the recording medium, and from the recording medium to the loudspeaker or headphone. They will mention the need to control audio levels within recognised parameters and will explain the difference between analogue and digital audio recordings with respect to the intrusion of distortion. Learners will explain audio file formats with reference to professional uncompressed formats, for example WAV and AIFF, and the consumer MP3 and other similar formats unsuitable for making professional recordings. They will also explain types of microphone in terms of their construction (capacitor, condenser, dynamic), use (for vocals, speech, commentary, music, sound effects, ambient sounds), polar response (unidirectional, omnidirectional, bidirectional, cardioid, hypercardioid), and brand/model (Shure SM58, AKG C1000, Beyer 201, etc.). Learners will explain the main file formats used in both professional and consumer sound recording (WAV, AIFF, MP3), with reference to the need to keep recording levels within specific parameters when recording in order not to oversaturate the recording medium. They will refer to the decibel as the unit of sound measurement and the way in which record level meters and bar displays must be monitored to maintain optimum sound record levels. Recording devices will also be explained with reference to the need to use external microphones and there will a distinction drawn between portable freestanding devices (often hand-held) and computer-based recording software and purpose built fixed recorders found in studios.

Learning aim B

For distinction standard, learners will produce a clear and unambiguous definition of the terms frequency and pitch and clarify the differences between reflection and refraction. They might write to accompany their recordings, 'The frequency of a sound is measured in Hertz (cycles per second). An example of high frequency sound is a woman's voice whereas a man's will often be lower in frequency. Pitch in music refers to the key and is stated also in Hertz. Sound originates from a particular source and travels in ripples like the effect of throwing a pebble into a pool of water. If a sound hits a hard solid surface it is reflected back and causes an echo of the original sound but travelling back towards the source, whereas if a sound hits a soft surface like a fabric or an upholstered chair or sofa it is absorbed and does not muddy the clarity of the original sound. Recording studio walls are acoustically insulated so that sound is not reflected but absorbed, allowing the sound quality to remain high.' Learners will provide detailed explanation of the nature of a range of the interior and exterior recordings produced to demonstrate the effect that the chosen environment has on the particular recording. It is better to use the same sound, for example a passage of prose or an exchange between two voice actors (one male, one female) to exemplify the advantages, disadvantages and effects of acoustic situations on the sounds generated. Learners will also examine the effects of intrusive sounds present in the chosen environment. Their results will be presented as a notated portfolio of recordings.

For merit standard, learners will analyse the terms frequency, pitch, reflection and absorption, providing examples of each, and the context in which they will affect sound. They will apply these terms to interior and exterior recording locations and to examples of sound having been recorded in both locations; their commentary will be appropriate but not necessarily detailed. Their evidence will be in the form of a portfolio of recordings with appropriate commentary, either written or recorded, as audio or audio visual.

For pass standard, learners will explain the terms frequency, pitch reflection and absorption as well as the effect of interior and exterior locations on recorded sound. Their portfolio of recordings will demonstrate basic differences in the nature of interior and exterior acoustics. Their selection of locations will be standard live interior and ambient exterior and the recording will be perhaps a single voice reading dialogue.

Learning aim C

For distinction standard, learners will comprehensively plan two different sound recordings, submitting as evidence appropriate pre-production documentation, prior to recording, that includes equipment lists with justifications of the type of microphone and their placement, question scripts in the case of voice recordings, explanation of how ambient background noise will feature in the recording and how sound balance will be managed when recording with a single mono microphone. All planning will be done prior to the recordings being made. Their recordings will each be of high quality with appropriately balanced background ambience, whether interior or exterior. Sound quality in each case will be clear and there will be no discernible errors or lessening of clarity. Recorded levels will be within the −6db to full coding level (0), with no clipping or distortion.

For merit standard, learners will plan effectively for sound recordings, demonstrated through appropriate equipment lists and some justification of choice of microphone and explanation of the issues that will be considered during recording. Their recordings will be of a good quality, for example they will clear, with few errors or unwanted background sounds and fit for purpose. Learners' recordings will be, in the main, within the −6db to 0 coding levels, with occasional excursions outside these norms. Background ambience will, for the most part, be at a manageable and expected level with occasional errors of level.

For pass standard, learners will plan appropriately for the recordings, including equipment lists and identification of location and appropriate microphone, but not necessarily justifying their choice. There may be little indication of how ambient noise will be handled. Overall they will plan sufficiently to enable the production of two sound recordings. Sound quality in the recordings will be acceptable in terms of being clear enough to understand and recognise the nature of the recording, but record levels may be erratic and sometimes lower and/or higher than the −6db to full coding 0 level required, with occasional errors, omissions and unwanted noise or sounds present. Background ambience may be over imposing or not present when expected.

Links to other units

This unit links to:

- Unit 11: Radio Production – Fiction
- Unit 24: Sound Editing
- Unit 39: Sound Mixing.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:

- guest speakers
- opportunities to visit suitable businesses.

Unit 26: Writing Copy

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Producing original copy for media texts such as newspapers, magazines, web pages and pop-up advertising, is known as copywriting.

Unit introduction

The production of original text, known as copywriting, is an important element in the construction of most print-based and interactive media texts. Producing original copy for media texts such as newspapers, magazines, web pages and pop-up advertising, can be a demanding job that requires creativity and the ability to work to tight deadlines.

In this unit, you will gain an understanding of the role and responsibilities of a copywriter in today's demanding and fast-paced media marketplace. You will investigate the composition of different target audiences and the purpose and format of a range of media texts, exploring the effect they are meant to have on the audience and how this affects the style and form of the writing. The skills and knowledge you develop will enable you to produce copy for different purposes and for use in a range of publications.

This unit will allow you to develop your copywriting skills in a range of mediums and can contribute to a writing portfolio that can be taken into industry or developed in higher education.

Learning aims

In this unit you will:

A Understand the roles and responsibilities of copywriters

B Prepare media texts for copy-write production

C Produce copy for different audiences, publications and formats.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand the roles and responsibilities of copywriters	**A1** The use of copywriters in the creative media industry **A2** The role of a copywriter working in different contexts **A3** Responsibilities of a copywriter	A report that examines the use of copywriters in the creative media industry, outlining the roles and responsibilities and including legal and ethical considerations.
B Prepare media texts for copy-write production	**B1** Explore texts from a range of media sectors **B2** Gather information from primary and secondary sources **B3** Collate information for use in copy-write production	A research portfolio, referenced and annotated, containing all sourced and fully-collated information in preparation for use in production activities.
C Produce copy for different audiences, publications and formats	**C1** Identify target audience for production activity **C2** Plan content for production **C3** Produce copy for different publications and in different formats	Pre-production paperwork, (identifying the appropriate target audience), planning, drafting and production of final written copy in an appropriate format.

Content

Learning aim A: Understand the roles and responsibilities of copywriters

A1 The use of copywriters in the creative media industry

- Investigating and defining the use of copywriting in the media sector.
- The purpose of copywriting in different media contexts:
  - advertising
  - online content
  - government
  - press releases
  - blurb
  - marketing.
- How copywriting is used in different media sectors – print, web based, advertising and marketing.

A2 The role of a copywriter working in different contexts

- Identify a range of roles that require copywriters.
- Above the line advertising such as:
  - TV
  - film
  - interactive media
  - radio
  - posters for branding and marketing.
- Below the line advertising such as:
  - brochures and leaflets
  - direct mail shots to companies and individuals.
- Ensuring readability of texts produced through use of style, sentence length, paragraphing, clarity, vocabulary, register, spelling, grammar, syntax and punctuation.
- To produce work with credibility so that the client's reputation is not damaged in any way.
- To ensure content maintains objectivity and is accurate, truthful, fair and balanced.

A3 Responsibilities of a copywriter

- To understand and maintain social and cultural awareness.
- To ensure fair representation of protected characteristics – race, gender, disability, religious beliefs and sexuality.
- Be aware of connotations and alternative readings – by children, minorities, victims.
- Be aware of and adhere to legal constraints – defamation, contempt, copyright, children and young persons, confidentiality, official secrets.
- Be aware of and adhere to ethical constraints – codes of practice, privacy, intrusion, harassment.

Learning aim B: Prepare media texts for copy-write production

B1 Explore texts from a range of media sectors

- Identifying texts from a range of sectors – print, web based, advertising and marketing.
- Analysing content of texts to understand style, format and delivery.
- Examining layout of texts to identify target audience and understand audience appeal.
- Investigating how copy is released to audience in a range of formats – print, web based, viral content.

B2 Gather information from primary and secondary sources

- Gathering information through a range of activities – observations, conducting interviews, reading, documentary sources, electronic sources, libraries and indexes.
- Utilising a range of techniques – primary and secondary and quantitative and qualitative.
- Differentiating between sources that are official, unofficial, attributable and confidential, and utilising information appropriately.
- Recording information in different formats, note taking, storing on digital formats.
- Gathering information for use in own copywriting production.

B3 Collate information for use in copy-write production

- Correct labelling of materials – titles, referencing and cross-referencing.
- Organising content into handwritten notes, cuttings, copies from reference books, pictures, charts and diagrams.
- Arranging content by differentiating sources – people, organisations and websites.
- Use of index, by subject area, use of titles and keywords and including names and dates.

Learning aim C: Produce copy for different audiences, publications and formats

C1 Identify target audience for production activity

Defining audience for production work based on:

- viewing preferences
- consumption habits
- geodemographics
- protected characteristics
- online profile
- use of medium.

C2 Plan content for production

Undertake planning for content production using relevant pre-production techniques and paperwork:

- sourcing written information
- sourcing pictures
- producing templates
- drafting written content
- drafting layout
- gathering test audience feedback
- evaluating efficacy of draft content.

C3 Produce copy for different publications and in different formats

- Finalising content based on intended market:
  - o news stories – hard news, soft news
  - o features – personal experience, investigative feature, informational, instructional
  - o interviews – profile, personality
  - o advertising and promotional.
- Maintaining appropriate house style for type of product and intended audience:
  - o discursive
  - o question and answer
  - o descriptive features
  - o argument
  - o persuasive language.

- Produce content using suitable formats for chosen medium:
  - newspapers
  - magazines
  - books
  - flyers
  - leaflets
  - posters
  - web pages and other online content.
- Consideration of suitability of content:
  - length – shortening, expanding or merging texts
  - accuracy – checking facts, correcting errors, ensuring balance and attribution
  - referencing and links with illustrations suitable for intended audience and market.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand the roles and responsibilities of copywriters		
A.P1 Explain the use and purpose of copywriting in the creative media industry. **A.P2** Explain the roles and responsibilities of copywriters working in the media sector.	**A.M1** Analyse purpose, roles and responsibilities of copywriters working in the creative media sector.	**A.D1** Evaluate purpose, roles and responsibilities of copywriters working in the creative media sector.
Learning aim B: Prepare media texts for copy-write production		**B.D2** Evaluate the style, format and delivery of texts from different media sectors to gain an understanding of copy production work for audience appeal. Use research material.
B.P3 Examine style and format of texts from different media sectors. **B.P4** Use primary and secondary materials to competently inform copy production work.	**B.M2** Analyse style and format from different media sectors.	
Learning aim C: Produce copy for different audiences, publications and formats		**C.D3** Produce copy written to near professional standards for different audiences and formats, utilising highly-effective language skills and techniques.
C.P5 Use appropriate pre-production techniques in the planning of copy written for different target audiences.	**C.M3** Produce copy written effectively for different audiences and formats that utilise good language skills and techniques.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.P4, B.M2, B.D2)

Learning aim: C (C.P5, C.M3, C.D3)

Further information for teachers and assessors

Resource requirements

Learners should have access to:

- the internet (essential)
- a wide range of media products
- viewing, listening and reading facilities (as appropriate).

Essential information for assessment decisions

Learning aim A

Learners will be required to individually undertake analysis of the roles and responsibilities of copywriters in a range of contexts and in relation to a range of media sectors.

For distinction standard, learners will fully explain social, ethical and legal obligations and justify their points using supporting arguments or evidence, developing ideas critically and drawing out of an example precisely the point it illustrates. They will show a clear and detailed understanding of the impact that obligations and constraints have on the writer and give a fully coherent explanation of the subsequent social and cultural meanings generated and maintained. Learners will acknowledge, to some degree, the power the reader has to challenge and reject the preferred meanings that are circulated.

For merit standard, learners will begin to explain (rather than describe), with reference to detailed illustrative examples, the social, ethical and legal obligations of writers, expressing their ideas with clarity and including specific examples of stories or articles in which the representation of gender, age, race or sexuality has been a significant factor. They will also begin to examine the impact that these constraints can have on the writer, as well as the potential effects on the reader.

For pass standard, learners will correctly describe some of the main social, ethical and legal obligations of writers, for example listing comments on social and ethical issues as representation, privacy and bias, and providing a basic description of them. However, overall, these descriptions will lack the detail and exemplification required for higher grades. Similarly, learners' descriptions of legal obligations might incorporate the use of bullet points to list and describe the main rules on copyright, libel, contempt of court and stories involving minors but may not provide greater exemplification or further discussion.

Learning aim B

Learners will work individually to analyse the style, format and delivery of a range of texts from a number of media sectors in order to gain a full understanding of the styles and modes of address used. They will undertake both primary and secondary research across a range of relevant sources, analysing and interpreting the information in order to inform their own copy-write production work.

For distinction standard, learners will produce highly-detailed analyses of texts from a range of media sectors, reflecting a highly-developed understanding of the styles and formats used in a chosen medium and ability to identify and interpret the various modes of address. They will work independently and effectively to gather and manage valid and useful information in a manner that reflects near-professional standards. They will undertake effective research on their own initiative, and communicate with others using the range of personal and social skills that would be expected of them in a professional context. The primary research undertaken will be thoroughly planned and implemented with creativity and ingenuity. The results obtained will be highly successful, and effectively used to inform the writing process. The secondary sources included will be fully annotated in a confident and consistent manner that includes detailed explanations of why specific elements have been selected and for what purpose.

For merit standard, learners will produce detailed analyses of texts from a range of media sectors, reflecting a sound understanding of the styles and formats used in a chosen medium and an ability to identify and interpret the various modes of address. They will provide explicit evidence that the gathering and management of research data has been undertaken carefully and competently, with only occasional assistance, in order to inform their own production planning. The primary research undertaken, for example interviews or a survey, will be carefully considered and planned, and competently and confidently implemented with the use of appropriate codes and conventions. The results obtained will be mainly successful and used with care and a clear sense of purpose. Learners may need occasional support, particularly when trying to apply more sophisticated techniques. The secondary sources used will be carefully annotated in a manner that goes beyond simple highlighting and will include brief comments and notes in the margin showing clear evidence that the research has been used in a meaningful way. Learners will explain their use of secondary research, what they tried to accomplish and how they will use the evidence collected to inform their own copy-write production work.

For pass standard, learners will produce an appropriate explanation of texts from a range of media sectors, reflecting an understanding of the styles and formats used in a chosen medium and of the various modes of address. They will provide explicit evidence of the gathering of information from both primary and secondary sources and demonstrate how this information was then used to inform their own production and planning. The primary research undertaken may not have been particularly well designed or implemented but will at least have been purposeful, with the application of some relevant techniques and resulting in some relevant, although not entirely successful, data. Any secondary sources included in the portfolio will be annotated to show what information was used and why, although this may be no more than simply highlighting key words or sentences. Learners will describe their use of secondary research and what they have tried to accomplish.

Learning aim C

Learners will undertake their own copy-write production work and will produce a range of texts in suitable styles for different audiences, publications and in a number of formats.

For distinction standard, learners will produce effective copy using a range of skills and techniques that reflect near-professional standards. They will produce fluent and well-organised copy that demonstrates creativity and flair, for media products presented using appropriate formats and styles for the target audience. Learners' use of language skills and techniques will be highly effective and the style, register and mode of address will be carefully considered and consistent throughout. Their material will be fluent with very few, if any, minor technical errors of English. Learners will be capable of working independently and effectively on their own initiative and, when working with others, they will work positively and cooperatively, meeting deadlines and employing the range of personal skills that would be expected of them in a professional context.

For merit standard, learners will produce work with care and competence, to quality and in quantity. They will show awareness of a wide range of audiences and contexts and their work will be approached thoughtfully and methodically, with adequate preparation, and presented neatly. Although learners might still be working within recognisable generic conventions, they will demonstrate the thinking behind the application of these conventions, which will be used with some inventiveness. They will write in an appropriate format, making good use of language skills and techniques, with a considered and consistent style, register and mode of address throughout.

For pass standard, learners will plan and produce copy-written content for different audiences and contexts, applying appropriate conventions. They may not fully realise their intention but their writing will be purposeful with some sense of design and the deliberate application of appropriate language skills and techniques. They will write in an appropriate format with at least some understanding of the relevant generic conventions. Learners will clearly attempt to modify the style, register and mode of address accordingly, although this may not be maintained throughout. Their material will be sufficiently clear to understand, although there may be some errors of grammar, spelling and punctuation.

Links to other units

This unit links to:

* Unit 17: News Production
* Unit 22: Interviewing Techniques.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:

* guest speakers
* opportunities to visit suitable businesses.

Unit 27: Digital Photography

Level: **3**
Unit type: **Internal**
Guided learning hours: **60**

Unit in brief

Learners explore the techniques required to produce digital photographs. They will experiment with and use digital photography techniques to produce digital photographs.

Unit introduction

Digital photography is used widely in the media industries to convey a message, illustrate the written word or to advertise a product. It can be used as a recording tool or as an opportunity to integrate text and images in an e-magazine or newspaper. Photographers are employed to produce digital photographs in situations such as photojournalism, advertising, fashion, paparazzi and specialist areas in industry and commerce.

In this unit, you will learn about photography techniques and the uses of digital photography. Visual communication is important in the world of social and interactive media. You will learn how to read and understand digital images, experiment with digital photography techniques and produce digital photographs. You will then produce digital photographs to a brief for use in a digital media product.

Digital photography is a creative medium and you will be able demonstrate your skills through the production of creative and exciting digital photographs. The skills you develop in this unit can be applied to a range of digital photography genres across a wide range of publications. The work you produce for this unit can form part of a portfolio of work for progression to employment or higher education.

Learning aims

In this unit you will:

A Understand digital photography production

B Develop skills in digital photography techniques

C Create digital photography to produce images for a digital media product.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand digital photography production	**A1** Applications and uses of digital photography **A2** Digital photography production	An illustrated report or presentation on the uses of digital photography, evaluating how it is used in the digital media industries. Examples used to provide insight into the uses of digital photography in a range of digital media products. An illustrated report or presentation on the techniques and technology of digital photography with examples to support learners' understanding.
B Develop skills in digital photography techniques	**B1** Exploring digital photography **B2** Digital photography techniques **B3** Develop concepts for digital photographs	Evidence of learners' ability to read and understand visual language using a range of exercises/visual stimuli. Exercises demonstrating learners' ability to develop creative ideas and to produce a wide range of digital photographs using a range of techniques and technology. A portfolio of experimental work in an appropriate format.
C Create digital photography to produce images for a digital media product	**C1** Develop concepts for digital photographs for a brief **C2** Production of digital photographs for a brief **C3** Review of technical digital photography work	Evidence of the management of the pre-production process, to include reviewing and reading a brief, developing ideas for the brief and consideration of resources required to fulfil the brief. A set of digital photographs produced to meet the brief.

Content

Learning aim A: Understand digital photography production

A1 Applications and uses of digital photography

- Applications:
  - advertising – magazines, newspapers, billboards, e-magazines, pack shots
  - promotional – campaigns, marketing
  - fashion – magazines, e-magazines, website
  - photojournalism – newspapers, magazines, e-magazines
  - portraiture – children, adults, boutique
  - studio-based work – pack shots, technical
  - architectural – websites, illustrated reports, guidebooks
  - medical – packaging, experimental, records
  - fine art – landscape, art security
  - documentary – books, magazines, e-magazines.
- Uses:
  - magazines and e-magazines – cover, events, paparazzi
  - newspapers and e-newspapers – front page, editorial, celebrity stories
  - hoardings and billboards – advertising, promotional
  - books – e-book content, covers, textbooks, travel guides, instructional
  - web pages
  - interactive publications – moving displays, computer-generated imagery (CGI)
  - galleries – guides, posters
  - individual clients – portraits, weddings.
- Purposes:
  - anchoring written publications – to reinforce the written word
  - marketing – posters, leaflets, adverts
  - promotional – brochures, interactive screens
  - tell a 'story' – photojournalism, documentary, generate interest/raise awareness – charity campaigns, road safety campaigns, public health campaigns
  - increase sales – front covers (e-magazines, newspaper front page, computer games cover, music CD/DVD).

A2 Digital photography production

- Digital equipment:
  - manual cameras – digital single lens reflex (DSLR)
  - automatic cameras – digital single lens reflex (DSLR)
  - hand-held devices – smartphone cameras, point and shoot
  - large format cameras – plate cameras
  - medium format cameras
  - lightweight cameras
  - extreme sports cameras – Gopro®, Drift Stealth®, iON®
  - recording both still and high-definition video.

- Camera components:
  - viewfinder
  - digital shutter system
  - lens – functions, types
  - image sensors
  - aperture – f-stops
  - shutter
  - memory – card, internal storage
  - file storage – file formats (RAW, Jpeg, TIF)
  - devices – hard drives, cloud, memory cards.
- Lighting:
  - flash – portable, hand-held, studio
  - studio lighting – tungsten, light-emitting diode (LED), soft box, HMIs
  - reflectors
  - natural light
  - colour temperature – warm, cold, degrees Kelvin.
- Camera support:
  - tripod
  - monopod
  - hand-held
  - drone.
- Exposure:
  - correct exposure
  - underexposed
  - overexposed
  - auto-exposure bracketing
  - HDR.
- Image manipulation:
  - remove unwanted material
  - resize images
  - convert files
  - compress files.
- Exporting and storing of files:
  - file transfer – from digital camera, from smart device, to computer, to hard drive, to cloud storage
  - file formatting – Jpeg, RAW, TIF
  - file compression – lossless, lossy
  - storing – hard drive (file name, folder name), cloud storage (accessibility, access for a range of devices), external devices (memory stick, external portable hard drive, CD/DVD).

Learning aim B: Develop skills in digital photography techniques

B1 Exploring digital photography

- Reading images:
  - shorthand communication – immediate, universal symbols, e.g. colour
  - *mise-en-scène* – setting, props, costumes, makeup, figure expression
  - 'anchoring' the text or other visual material, to provide the viewer with information to further their understanding of the product
  - denotation/connotation of meaning – preferred/oppositional reading
  - visual language – composition, image construction (form, texture, semiotics, connotation, representation).

- Types of shots:
  - exterior location shots – uncontrollable conditions, urban, rural, architectural, e.g. for publicity, marketing
  - interior shots, stylised (controlled) lighting, e.g. portraits, pack shots, fashion
  - events photography – the 'money' shot, unpredictable conditions, e.g. sports, promotions, paparazzi
  - night shots – lighting issues, long exposure, light trails, use of flash
  - shots of moving objects/people – shutter speed, panning, zoom, focus
  - portraits – intended audience, official, unofficial, e.g. people, groups.

B2 Digital photography techniques

- Framing – landscape, portrait, shot types (close-up, long shot, medium shot, medium long shot), macro, panorama.
- Angle – high, low, wide-angle and super-wide-angle (barrel distortion, fisheye effect), canted, bird's-eye.
- Composition – rule of thirds, foreground, background.
- Focus – sharp, soft, depth of field, manual focus, autofocus, single shot focus, continuous focus.
- Zoom – analogue, digital, optical.
- Digital manipulation – colour, shape, texture, cropping.
- Software – for palettes, cropping tools, stamps, lassos, layering; digital printing (printer functions, paper choice).

B3 Develop concepts for digital photographs

- The brief – purpose, use, target audience, media product.
- Ideas development – analysing a brief, research, brainstorming, discussion.
- Trial layout – mock-ups, mood board, how the photographs will meet the requirements.
- Review ideas – alternative ideas, a contingency plan, with the target audience, with a client.
- Apply changes from review, where necessary.

Learning aim C: Create digital photography to produce images for a digital media product

C1 Develop concepts for digital photographs for a brief

- Review and read a brief.
- Understand a brief.
- Develop ideas to fulfil a brief.
- Pitch ideas for digital photographs to meet the brief.
- Resources:
  - availability of resources – personnel, equipment, space, time
  - bookings – studio, personnel, models, props, equipment
  - image resolution – RAW files, compressed files, pixel size, ASA/ISO (film speed versus pixilation)
  - exterior location – weather, light, positioning, permissions, risk assessment
  - interior location – light sources, power supply, risk assessment, props, backgrounds.

C2 Production of digital photographs for a brief

- Managing the production process:
  - selecting and using equipment – camera, smart device, hand-held, supported, lighting, storage devices
  - booking resources
  - contacting personnel – crew, talent
  - arranging for props
  - call sheets – location, studio
  - risk assessment – training cables, hot lights, camera support
  - budget – resources, materials, personnel, props, transport.
- Producing digital photographs for a brief:
  - interior photographs – portraits, pack shots, fashion shoot, cover shots
  - exterior photographs – sports, rural landscape, urban landscape, architectural, promotional, paparazzi
  - composition – appropriate for the media product (rule of thirds, differential focus, framing, cropping, angles)
  - *mise-en-scène* – props, costume, set, lighting
  - lighting
  - storing – correct file format, correct file name, protected files, backup files
  - selecting the final photographs – image quality, visual meaning, file size (pixilation issues), meeting the commission
  - display of final photographs – printed out, on-screen, exhibition.

C3 Review of technical digital photography work

- Technical review:
  - camera
  - shutter speed
  - aperture
  - focus
  - framing
  - use of *mise-en-scène*
  - composition
  - lighting – natural light, tungsten light, LED light, flash.
- The brief:
  - the fulfilment of the brief
  - creative intent – intended response, intended meaning
  - production of meaning – outcome, actual response
  - visual language – composition, image construction (form, texture, semiotics, connotation, representation)
  - fitness for purpose – for audience (social group, gender, peer group, political views), for client (realisation of intentions, technical qualities, aesthetic qualities)
  - creative feedback – audience, client, peers, teacher.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Understand digital photography production		**A.D1**	Demonstrate comprehensive understanding of the application, uses and purposes of digital photography and component parts.
A.P1 Explain the application, uses and purposes of digital photography. **A.P2** Explain digital camera technology and component parts.	**A.M1** Analyse the application, uses and purposes of digital photography. **A.M2** Analyse digital camera technology and component parts.		
Learning aim B: Develop skills in digital photography techniques		**B.D2**	Demonstrate creativity producing imaginative digital photographs using interior and exterior location shoots.
B.P3 Develop appropriate ideas for digital photographs for interior and exterior location shoots. **B.P4** Demonstrate the use of appropriate digital photography techniques for interior and exterior location shoots.	**B.M3** Develop effective ideas for digital photographs for interior and exterior shoots. **B.M4** Demonstrate effective use of digital photography techniques for interior and exterior location shoots.		
Learning aim C: Create digital photography to produce images for a digital media product		**C.D3**	Produce sophisticated technical photographs on exterior and interior shoots for a digital media product.
C.P5 Plan appropriate concepts for a digital media product. **C.P6** Produce digital photographs using appropriate interior location techniques for a digital media product. **C.P7** Produce digital photographs using appropriate exterior location techniques for a digital media product.	**C.M5** Produce effective digital photographs using exterior techniques for a digital media product. **C.M6** Produce effective digital photographs using interior techniques for a digital media product.		

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1 A.M2, A.D1)

Learning aim: B (B.P3, B.P4, B.M3, B.M4, B.D2)

Learning aim: C (C.P5, C.P6, C.P7, C.M5, C.M6, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- a range of digital photography equipment
- computers and appropriate software for downloading and editing digital photographs.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will clearly demonstrate an understanding of the applications and identify the uses of digital photography. They will provide examples of the ways in which digital photography is used in the media industries and demonstrate a sophisticated understanding of its uses in a wide range of applications. Learners will have a clear understanding of the purposes of digital photography across a range of media industries and digital media products. They will demonstrate a comprehensive understanding of camera equipment, the component parts of a camera, ancillary equipment and the exporting/storing of digital photographs.

For merit standard, learners will analyse the applications and identify the uses of digital photography, using limited examples from their work. They will provide some examples of the ways in which digital photography is used but they will not have fully explored this. Learners will have an understanding of the purposes of digital photography across a range of media industries and digital media products. They will demonstrate an analysis of camera equipment, the component parts of a camera, ancillary equipment and the exporting/storing of digital photographs.

For pass standard, learners will explain the applications and uses of digital photography. However, they will not go beyond the obvious, for example learners might write about the use of digital photography in a newspaper rather than covering a number of examples. They will explain in simplistic terms the ways in which a camera works. However, they will not be able to fully demonstrate understanding of the complexities of camera equipment and its component parts.

Learning aim B

For distinction standard, learners will demonstrate a high level of understanding in reading images. They will deconstruct digital photographs in terms of *mise-en-scène*, anchoring of text and visual language in a sophisticated manner, using this to inform their exploration of the subject. They will have a full understanding of the types of shots used in digital photography as well as the constraints on them. Learners will demonstrate their understanding of digital photography techniques through the development of a wide range of ideas, experimenting with these both in interior and exterior shoots. The ideas they develop will be imaginative in their link between techniques and potential digital photographs. They will clearly link the development of ideas with the requirements of a brief, an audience and the ways in which ideas can change as a result of review or consultation with a client.

For merit standard, learners will demonstrate that they can read images. They will deconstruct digital photographs in terms of *mise-en-scène*, anchoring of text and visual language in a way that is competent rather than sophisticated and helping to inform their exploration of digital photography. Learners will have an effective understanding of the shot types used and some understanding of the constraints on these shots. They will show an understanding of techniques through the development of a range of ideas and experimentation both in interior and exterior shoots. The ideas they develop will be sufficient to demonstrate their understanding of the link between techniques and potential digital photographs. They will link the development of ideas with the requirements of a brief, an audience and the ways in which ideas can change as a result of review or consultation with a client.

For pass standard, learners will demonstrate some understanding of being able to read images. They will offer basic deconstructions of digital photographs with limited reference to *mise-en-scène*, anchoring of text and visual language and it will be clear that this has in some ways informed their exploration of techniques. They will demonstrate a basic understanding of the types of shots used in digital photography and the constraints on these shots. Learners will demonstrate some understanding of digital photography techniques through the development of some ideas and experiment with these ideas both in interior and exterior shoots. The ideas they develop will be quite basic and will demonstrate some links between techniques and potential digital photographs. Additionally, they will show some understanding of the link between the development of ideas with the requirements of a brief and an audience and some understanding of how ideas can change as a result of a review or consultation with a client.

Learning aim C

For distinction standard, learners will effectively plan for the production of digital photographs for a digital media product. They will undertake effective pre-production that allows them to produce digital photographs for interior and exterior locations, demonstrating their sophisticated use of both. Learners will produce digital photographs for a brief, demonstrating sophisticated understanding of the use of digital techniques and technology. They will ensure and demonstrate that they have fully met all the requirements of the brief.

For merit standard, learners will demonstrate some skills in planning for the production of digital photographs. They will undertake pre-production that provides them with an opportunity to be successful in the production process. They will use interior and exterior locations to demonstrate their skills and will produce competent digital photographs that show their skill in using equipment successfully. They will understand the use of digital techniques and technology, resulting in digital photographs that are mainly fit for purpose. Learners will provide evidence of meeting most of the major points in the brief although there will be some parts that are not fully covered.

For pass standard, learners will demonstrate limited skills in planning for the production of digital photographs, providing them with an opportunity to demonstrate some skills appropriate to both interior and exterior locations. Learners will produce digital photographs to a brief but will not have fully understood the brief or not provided digital photographs that are always fit for purpose. Learners will provide evidence of meeting some of the main points in the brief.

Links to other units

This unit links to:
- Unit 29: 2D Digital Graphics
- Unit 30: Page Layout and Design for Digital Media.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities to do so.

This unit would benefit from employer involvement in the form of:
- guest speakers and interview opportunities
- work experience
- opportunities to visit suitable businesses.

Unit 28: Image Manipulation Techniques

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners explore approaches to image manipulation and develop skills in digital image manipulation techniques to produce a final image for a specific media purpose.

Unit introduction

Image manipulation is used to create and enhance photographic images for a wide range of applications in fine art, illustration, publishing and other media products, including books, album and computer game covers, advertisements and promotional materials, images for web pages and interactive media products, film posters and textures for games environments.

In this unit, you will learn about the different historic and contemporary approaches to image manipulation and its uses in the media industries, both to correct images for promotional purposes and to create composited and manipulated images for the purposes of advertising, illustration and even fine art. You will gain the skills needed to develop a final digitally manipulated image for use in a media product.

You can apply the skills you develop in this unit to images that can be used in any media sector. The images you produce for this unit can form part of a portfolio of work for progression to employment or higher education.

Learning aims

In this unit you will:

A Examine approaches to image manipulation

B Explore the use of digital manipulation for a specific media product

C Create a digitally manipulated image for a specific purpose.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Examine approaches to image manipulation	**A1** Approaches to image manipulation	A report that examines the development of different approaches to image manipulation, the techniques used with reference to associated legal and ethical issues, using examples of use for different purposes.
B Explore the use of digital manipulation for a specific media product	**B1** Digital image manipulation techniques	An ideas generation portfolio, including annotated initial thumbnail ideas and experimentation, with at least three image manipulation techniques to develop a variety of appropriate ideas for a specific media product; ideas for this product might be a book cover, magazine advertisement, image for a website home page, film poster, or complete suite of textures for a specific game environment.
C Create a digitally manipulated image for a specific purpose	**C1** Generating and selecting ideas **C2** Producing a digitally manipulated image **C3** Evaluating a digitally manipulated image	A planning and production log, including a schedule, asset management and evaluation of the creative and technical choices made throughout. A final digitally manipulated image for a specific media purpose.

Content

Learning aim A: Examine approaches to image manipulation

A1 Approaches to image manipulation

- Corrective image manipulation techniques used in the advertising and publishing sectors:
  - o digital blemish removal techniques, including uses in fashion and beauty publishing
  - o digital colour correction techniques, including uses in tourism publishing
  - o pre-digital commercial image manipulation techniques, including manual photographic retouching (dodge, burn, tinting, colouring and conventional airbrushing).
- Creative digital image manipulation techniques used in advertising, illustration and fine art:
  - o digital photo-compositing (layering)
  - o digital visual effects and filters
  - o pre-digital use of manual photomontage and photographic collage in art and advertising
  - o legal and ethical issues, including the use of image manipulation for the purposes of advertising and journalism, and copyright and intellectual property rights relating to the original and manipulated images.

Learning aim B: Explore the use of digital manipulation for a specific media product

B1 Digital image manipulation techniques

- Creating visual roughs from initial thumbnail sketches.
- Digital drawing and painting tools.
- Image adjustment tools, including brightness and contrast, hue and saturation, colour balance.
- Editing and retouching tools, including selection tools, transform tools, dodge/burn, airbrush, gradients, clone.
- Compositing and manipulating layers and channels, including arranging and flattening, opacity, blending modes, layer styles, filters, alpha channels and masks.

Learning aim C: Create a digitally manipulated image for a specific purpose

C1 Generating and selecting ideas

- Digital mock-up of ideas from 'found' sources.
- Consideration of appropriateness to brief, target audience, production and technical constraints.
- Consideration of creative direction and influences.
- Consideration of legal and ethical issues.

C2 Producing a digitally manipulated image

- Scheduling and production milestones.
- Generating original imagery.
- Sourcing copyright free imagery.
- Digitising images and saving in appropriate formats.
- Managing assets using appropriate filing and naming conventions.
- Image settings, including size, resolution, colour mode.
- Resizing and importing images.
- Selecting appropriate digital image manipulation techniques.
- Optimising and exporting in an appropriate file format.

C3 Evaluating a digitally manipulated image

- Evaluation of the creative choices made and how they are influenced by contemporary practice.
- Evaluation of the techniques used.
- Evaluation of how the constraints of the brief have been met, including suitability for the intended purpose and platform.
- Evaluation of audience response.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Examine approaches to image manipulation		**A.D1**	Evaluate detailed examples of the uses of different image manipulation approaches and techniques and their effectiveness in fulfilling different purposes.
A.P1 Explain the development of approaches to image manipulation and the associated techniques. **A.P2** Explain the legal and ethical issues associated with the use of image manipulation for a specific sector.	**A.M1** Analyse approaches to image manipulation using detailed examples relating to different purposes, with reference to their development, the techniques used and associated legal and ethical issues.		
Learning aim B: Explore the use of digital manipulation for a specific media product		**B.D2**	Consistently demonstrate an individual, creative approach when selecting and using digital image manipulation techniques to develop ideas for a manipulated image for a specific media product.
B.P3 Demonstrate the use of different digital image manipulation techniques to develop ideas for a manipulated image for a specific media product.	**B.M2** Select appropriate digital image manipulation techniques to develop ideas for a manipulated image for a specific media product.		
Learning aim C: Create a digitally manipulated image for a specific purpose			
C.P4 Produce a competent final digitally manipulated image for a specific media product in response to a brief. **C.P5** Explain appropriately the creative choices made when selecting a final idea.	**C.M3** Produce a final digitally manipulated image for a specific media product, demonstrating effective technical skills. **C.M4** Evaluate the creative choices made and the appropriateness of tools and techniques used when developing a digitally manipulated image.	**C.D3**	Produce a sophisticated final digitally manipulated image for a specific media product, demonstrating accomplished technical skills, justifying the creative choices made.

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.M2, B.D2)

Learning aim: C (C.P4, C.P5, C.M3, C.M4, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- digital still cameras
- scanners
- digital drawing tablets
- computers and appropriate drawing, painting and image manipulation software
- the internet
- traditional drawing and painting materials.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will specify different approaches and techniques and use detailed examples to evaluate the effectiveness of the techniques when applied to different purposes. The purposes selected may be the same or different for each technique analysed. The evaluation of examples will refer to the suitability for purpose in respect of aesthetic and audience considerations, and sophisticated comparisons will be made between examples. Learners may compare examples of current uses of digital techniques with historical pre-digital examples. Learners will produce evidence in a form that allows them to compare the different purposes and techniques by using examples. This evidence could be presented in a variety of ways, such as a report, presentation, blog or even a voice recording over a video sequence of examples used.

For merit standard, learners will use detailed and specific examples to offer a methodical and detailed comparison of approaches and of how they are applied to different purposes. Learners must refer in detail to how the techniques have been used to fulfil the purpose but there may be little or no evidence of qualitative judgements as to the effectiveness of the examples in doing so. Learners will demonstrate how digital techniques have developed from earlier traditional techniques and become more sophisticated over time. For example, if writing about digital retouching in fashion and beauty publishing, learners may make comparisons between examples of contemporary digitally retouched images and earlier photographically retouched or airbrushed images and may note that contemporary digital techniques, such as airbrush, burn and dodge tools take their names from traditional techniques used for the same purposes. They will analyse the legal and ethical implications of the examples used – they may write how, 'retouching images of models in fashion magazines may serve to give readers unrealistic expectations of beauty'.

For pass standard, learners will explain the approaches, with reference to specific uses, but examples to illustrate this are likely to be generic rather than referring to specific images. Learners will explain the development of the chosen pre-digital and digital techniques. Accurate reference will be made to associated legal and ethical considerations but this may be limited, for example learners may discuss the legal implications of using copyrighted images, or images to mislead people. For example, they may write: 'If a holiday company changes the background of a resort to make it look like there is a sunny beach behind it, when actually there is a building site and it is always raining, this could be seen as misleading advertising.' There will be some basic comparisons made between the techniques chosen.

Learning aim B

For distinction standard, learners will produce concept ideas for digitally manipulated images using different tools and techniques. They will demonstrate an individual, creative approach and are likely to combine techniques in interesting or unusual ways. The selection of tools and techniques used will be justified, which could be by means of annotation on a blog or in the presentation of the ideas produced.

For merit standard, learners will use tools fluently and explore different techniques effectively to clearly inform ideas, but the different techniques used may be limited in breadth or not combined to creative effect. The selection of tools and techniques used will be appropriate and will be explained by learners, but there will be little evidence of justification of the processes selected.

For pass standard, learners will present ideas using digital tools and techniques but the range of experimentation may be limited and the documentation of the process of using these to inform ideas will be limited and explanations may not always be clear.

Learning aim C

For distinction standard, learners will evidence detailed planning, which must include an analysis of the brief, scheduling and a clear development of the idea from ideas stage to digital mock-ups and completed image, along with other necessary documentation. The production of the finished digital image must be documented, which may be a production log, and learners will demonstrate a degree of sophistication and precision in the use of tools and techniques. The final product must fulfil its purpose and be free from obvious flaws. It will be exported in an appropriate format for its intended platform, for example poster, magazine or digital platform. Learners will generate original imagery (for example using photography, scanning in illustrations or textures, digital illustrations) and where third-party imagery is used to support this, copyright implications will have been fully and correctly considered. Learners will justify their creative and technical choices, compare them with historic and contemporary influences, and evaluate them in terms of fitness for purpose, with reference to the original constraints of the brief and as a result of feedback on the finished product from the client or target audience. They will demonstrate a professional approach to their work, including high attendance of classes and workshops, good timekeeping and meeting all interim and final deadlines.

For merit standard, learners will complete their documentation and they will consider and undertake all necessary elements of the planning and production processes. The use of tools and techniques is appropriate and the final image will be exported in an appropriate format for its intended platform. Learners will discuss the creative choices, the influences on these decisions and the appropriateness of tools and techniques used. While there may be minor flaws in the finished product, these will not be immediately obvious.

For pass standard, learners will follow appropriate processes to plan and produce the finished image, but may not evidence consideration of all the necessary elements of these processes. The use of tools and techniques may not always be appropriate and there may be minor, but obvious, flaws in the finished product. The finished image will be exported to fulfil its purpose, although not necessarily in the most appropriate format.

Links to other units

This unit links to:
- Unit 29: 2D Animation
- Unit 30: Page Layout and Design for Digital Media
- Unit 31: Coding for Web-based Media.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:
- guest speakers
- opportunities to visit suitable exhibitions.

Unit 29:   2D Digital Graphics

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

This unit introduces learners to the tools and techniques used in the creation of 2D digital graphics for use in media software and applications.

Unit introduction

2D digital graphics are used to enhance a wide range of print and interactive media products for a variety of purposes, including branding, supporting textual information, illustration, infographics and interface elements.

In this unit, you will explore the purposes and characteristics of 2D digital graphics and use industry practice to influence your development. You will be required to plan and design your own digital graphics for an intended purpose. There is a strong emphasis on the development of practical skills in this unit and you will need to demonstrate creativity and technical proficiency through a body of work designed for multiple media technologies and platforms.

You can apply the skills you develop in this unit to a wide range of purposes, and the 2D digital graphics you produce can form part of a digital portfolio of work for progression to employment or higher education.

Learning aims

In this unit you will:

A Investigate the purposes and characteristics of 2D digital graphics

B Explore the use of digital graphics tools and techniques for specific media purposes

C Create digital graphics for media products.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Investigate the purposes and characteristics of 2D digital graphics	**A1** Purposes of 2D digital graphics **A2** Characteristics of 2D digital graphics	A blog or report explaining the purposes and characteristics of 2D digital graphics, evaluating detailed examples of the professional use of different types of 2D digital graphics for different platforms in fulfilling different purposes.
B Explore the use of digital graphics tools and techniques for specific media purposes	**B1** Visual communication **B2** 2D digital vector graphic tools and techniques **B3** 2D digital bitmap graphic tools and techniques	A blog or sketchbook that logs learners' experiments using both vector and bitmap 2D digital graphics tools and techniques to visually communicate different ideas in response to a specified brief.
C Create digital graphics for media products	**C1** Planning 2D digital graphics **C2** Producing 2D digital graphics	A blog or sketchbook that includes documenting the planning and production process of a set of 2D digital graphics in response to a brief. Final graphics exported and integrated into a finished or dummy media product.

Content

Learning aim A: Investigate the purposes and characteristics of 2D digital graphics

A1 Purposes of 2D digital graphics

- Purposes:
  - illustration
  - information
  - education
  - branding and corporate identity
  - assist product functionality.
- Graphic products and platforms:
  - logo and branding design across a range of print and digital corporate and promotional material, including stationery, signage, digital presence, video idents
  - infographics and technical illustration in manuals, educational publications, annual reports, signage
  - illustrate and support textual information in publications, including magazines and websites
  - interface elements with interactive or animated elements in digital media products, including web buttons and banners, animated gifs, games and DVD interfaces, mobile apps
  - different technical constraints of different products and platforms.
- Aesthetics of different styles used for different purposes.

A2 Characteristics of 2D digital graphics

- Vector graphics:
  - paths and shapes
  - flat fill colours
  - scalable
  - small file size.
- Bitmap:
  - photographic gradients and depth
  - pixel editing
  - limitations, including loss of quality when scaled up
  - large file size.
- Different software appropriate to different applications.
- Technical characteristics required for different applications:
  - print – high resolution, CMYK colour
  - web – low file size for quick loading, RGB colour with potentially limited colour palette
  - compressed bitmap formats, including jpg, gif, png
  - vector formats, including SVG, SWF, PDF.

Learning aim B: Explore the use of digital graphics tools and techniques for specific media purposes

B1 Visual communication

- Use of visual language and colour to communicate ideas.
- Semiotics:
  - denotation and connotation
  - iconic, symbolic and indexical symbols.

- Graphic styles:
  - geometric style graphics
  - cartoon styles
  - realistic styles
  - combining typography and graphic elements
  - combining scanned textures or photographic images with graphic elements.

B2 2D digital vector graphic tools and techniques

- Vector drawing tools.
- Use of textures, gradients and patterns.
- Tracing photographic images and converting to vector paths.
- Graphs and charts.
- Scaling for use in different sizes.

B3 2D digital bitmap graphic tools and techniques

- Importing images.
- Using drawing and painting tools.
- Pixel editing.
- Editing contrast, brightness and colour.
- Layers and blending modes.
- Alpha channels.
- Changing colour mode for print or onscreen use.
- Changing image resolution for print or onscreen use.

Learning aim C: Create digital graphics for media products

C1 Planning 2D digital graphics

- Ideas generation, brainstorming, initial sketches.
- Analysis of brief, including purpose, target audience and any client, production and technical constraints.
- Creative decisions and how they are influenced by contemporary practice.
- Legal and ethical issues.
- Select appropriate resources, techniques and processes.

C2 Producing 2D digital graphics

- Use of appropriate digital tools.
- Graphic style.
- Creating a 'set' or 'family' of graphics exported in different sizes and formats for use on different printed, digital or video materials and across different media purposes to create corporate branding.
- Creating a 'set' of graphics to be used in a single media product:
  - logos, buttons, banners, menu interface elements for digital products
  - masthead, illustration, banners and flashes, folios in magazines.
- Exporting digital graphics in appropriate formats for use on different platforms and integrating into specific media products.
- Justification of creative and technical decisions.
- Fulfilment of original intentions and the requirements of the brief.
- Time management.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Investigate the purposes and characteristics of 2D digital graphics		
A.P1 Explain the purposes of 2D digital graphics for different platforms. **A.P2** Explain characteristics of different types of 2D digital graphics for different platforms.	**A.M1** Compare different examples of 2D digital graphics for different purposes and platforms.	**A.D1** Evaluate different detailed examples of 2D digital graphics for different platforms to fulfil different purposes.
Learning aim B: Explore the use of digital graphics tools and techniques for specific media purposes		**B.D2** Demonstrate a consistent creative approach to use of 2D digital graphics' tools and techniques to develop graphics in different styles, for a specific purpose.
B.P3 Explore 2D digital vector graphic tools and techniques. **B.P4** Explore 2D digital bitmap graphic tools and techniques.	**B.M2** Demonstrate effective use of 2D digital graphics' tools and techniques to develop graphics in different styles, for a specific purpose.	
Learning aim C: Create digital graphics for media products		**C.D3** Produce imaginative digital graphics for a specific media product demonstrating accomplished technical and self-management skills, justifying the creative choices made throughout.
C.P5 Produce appropriate digital graphics for a specific media product demonstrating basic technical skills. **C.P6** Review the creative and technical choices made when developing 2D digital graphics for a specific media purpose.	**C.M3** Produce effective digital graphics for a specific media product demonstrating technical confidence. **C.M4** Assess the impact of techniques selected and creative choices made when developing 2D digital graphics for a specific media purpose.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.P4, B.M2, B.D2)

Learning aim: C (C.P5, C.P6, C.M3, C.M4, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to industry standard software throughout the duration of teaching and learning delivery. They should also be encouraged to make use of current publications via a learning centre or online resources.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will consistently demonstrate a thorough and comprehensive understanding of the different purposes and characteristics of vector and bitmap graphics for a variety of print, digital and moving image platforms. Sources will be justified in terms of reliability and validity. The use of digital graphics to visually communicate ideas and information to specific target audiences should be a focus throughout. Learners will analyse how the graphics are designed to fulfil their purpose, and evaluate their effectiveness in doing so, with reference to detailed studies of professional design examples.

For merit standard, learners will demonstrate a clear understanding of the purposes and characteristics of vector and bitmap graphics referencing a variety of examples from print, digital or moving image platforms, although not all platform types or purposes will be covered and there is likely to be a focus on a particular platform or genre of product. The use of digital graphics to visually communicate ideas and information to specific target audiences should be evident and learners will analyse how professional examples of digital graphics are designed to fulfil a particular purpose.

For pass standard, learners will demonstrate an understanding of the purposes and characteristics of vector and bitmap graphics used for more than one purpose and must explain the characteristics of graphics when applied across different platforms. The range discussed will be limited and where examples are used to support the discussion the result will be descriptive rather than analytical.

Learning aim B

For distinction standard, learners will experiment with vector and bitmap software, demonstrating a high level of creativity and technical skill. Evidence (for example annotated screenshots) will explain the techniques and processes carried out clearly. There will be clear evidence of experiments being purposeful in response to the design brief and intended solutions. A variety of appropriate alternative ideas will be fully considered and demonstrate continuity in the development. Learners will give evidence of the development of different graphic elements in the intended media product, and it will be evident from the documentation that learners have considered how these ideas will be used in different ways on different platforms.

For merit standard, learners will experiment with vector and bitmap software, showing creativity and technical competence. Evidence (for example annotated screenshots) will demonstrate an understanding of the techniques and processes carried out. Experimentation will be clearly directed in response to the design brief and intended solutions. Some alternative ideas will be considered, although these may be variations on a similar theme. Learners will produce designs for different elements in a media product and consider the different products these may be applied to. However, the focus is likely to be on three or four graphic elements used in similar ways across print and digital platforms.

For pass standard, learners will experiment with vector and bitmap software, showing technical competence but design solutions will often be derivative. Evidence (for example annotated screenshots) will describe the techniques and processes carried out. Experimentation will generate ideas in response to the design brief, although the solutions may not always be fully appropriate. Learners are likely to arrive at a design solution for one or two design elements early in the experimentation process and apply variants of these for use across print and digital platforms.

Learning aim C

For distinction standard, learners will produce digital graphics demonstrating accomplished technical skill and imagination. Final graphics will show clear and consistent development from the experimentation in learning aim B. The final products will form a complete graphics set for use in a specific media product. This may be a comprehensive set of smaller graphic items, for example logos, button, banners, side menu for a web page, or may be a smaller set of more detailed graphics, for example for a company report page focusing around an illustration to pictorially illustrate a set of statistics accompanied by a page title and folios. All graphics will be optimised accurately and exported for use on different platforms and integrated into finished or 'dummy' mock-ups for different platforms. The final graphics must fulfil their purpose and be free from obvious flaws. Learners will produce documentation clearly justifying the creative and technical decisions made in the production and exporting processes, and evaluating how these fulfilled their original intentions and the requirements of the brief. Learners will demonstrate a professional approach to their work, including high attendance at classes and workshops, good timekeeping and meeting all interim and final deadlines.

For merit standard, learners will produce digital graphics demonstrating technical confidence. Final graphics will show development from the experimentation in learning aim B. The final products will form a set of graphics for use in a specific media product on different platforms, although this may not be complete and it may not contain all the elements that would be required for use across all relevant platforms. Graphics will be exported appropriately for use on different platforms, although the graphics may not always be a mock-up for the intended platforms. Learners will produce documentation assessing the impact of the creative and technical decisions made in the production and exporting processes, and how these related to their original intentions and the requirements of the brief.

For pass standard, learners will produce digital graphics demonstrating technical competence. The final graphics produced will be elements for use in a specific media product, and although the range produced may be limited it should include at least two main elements for use on at least one platform (for example logo and buttons for use on a web page). Graphics will be exported appropriately for use on at least one platform, and the intended use will be clear although may not always be fully optimised for this. Learners will produce documentation reviewing the creative and technical processes used and how the designs relate to their original intentions and the requirements of the brief.

Links to other units

This unit links to:
- Unit 14: Digital Magazine Production
- Unit 27: Digital Photography
- Unit 28: Image Manipulation Techniques
- Unit 30: Page Layout and Design for Digital Media
- Unit 33: 2D Animation.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:
- guest speakers
- opportunities to visit suitable exhibitions.

Unit 30: Page Layout Design for Digital Media

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

This unit will introduce learners to the tools and techniques used in the creation of page layout for digital printed or digital media products.

Unit introduction

Whether it's a web page, magazine spread or brochure, the best way to communicate with your audience is through a great layout. Layout design, the art of combining elements on the page, is an exciting creative challenge and this unit will introduce you to the principles and purposes of page layout design in digital and printed media products.

In this unit, you will explore the creative application of the fundamental principles that underpin page layout design. You will learn the important differences between designing for digital and print formats and have the opportunity to plan, design and produce page layouts for both the page and the screen. Working in response to a design brief, you will adopt the techniques you have learned to create a complementary page layout in both digital and print formats.

There will be a strong emphasis on practical skill development in this unit, requiring you to demonstrate creativity and technical proficiency through a series of designs for digital and printed platforms. All of the skills you develop in this unit can form part of a portfolio of work for progression to employment or higher education.

Learning aims

In this unit you will:

A Understand the principles of page layout design

B Develop skills in page layout design techniques for digital and printed media products

C Produce page layouts for digital and printed media products.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand the principles of page layout design	**A1** Common principles of page layout design **A2** Differences between digital and printed page layout outcomes **A3** Purpose of page layout design	An interactive report (blog, e-portfolio, ebook, presentation) that compares how both digital and printed page layout designs use common design principles for a specific audience and purpose in the respective mediums. The analysis of the page layout designs can take any suitable format, for example written, narrated screen recordings, annotated illustrations, audio and/or visual recordings.
B Develop skills in page layout design techniques for digital and printed media products	**B1** Constructing a new document **B2** Working with text **B3** Working with images and graphics **B4** Working with colour	A blog or sketchbook that documents learners' page mock-ups in digital and printed media formats. Evidence will clearly demonstrate the use of a wide range of techniques in page layout design. Learners will also reflect on the outcomes of their experimental work with different layout techniques and design principles.
C Produce page layouts for digital and printed media products	**C1** Responding to the brief **C2** Generating ideas for page layout design **C3** Creating page layout designs in print and digital formats	A blog or sketchbook that records the process of producing layout designs in both digital and printed formats in response to a design brief. Learners will provide evidence of the whole production process, including planning, asset preparation and developing the final layout designs.

Content

Learning aim A: Understand the principles of page layout design

A1 Common principles of page layout design

- Balance – symmetrical, asymmetrical and radial layouts.
- Alignment of text, objects and images.
- Contrast – weight, size, colour choices, manipulation of page elements, positioning of elements.
- Repetition – consistency across multi-page layouts.
- Proximity – grouping like items and separating them from other grouped objects.
- Emphasis – creating a visual hierarchy of page elements, use of white (negative) space, focal points, above the fold.
- Grid systems:
  - using grid structures to organise page content
  - columns, margins and gutters
  - common page layouts – number and size of columns
  - unconventional page layouts – effect of breaking the established rules of page layout design.
- Creating style and impact:
  - focal point of page
  - rule of thirds
  - golden ratio
  - design elements, including logos, bullets, folios, background elements, repeating elements
  - use of white space, scale and contrast
  - use of colour
  - current trends in print and digital page layout design.
- Typography:
  - appropriate font selection for purpose
  - type hierarchy
  - text flow
  - alignment and runarounds
  - creative use of typographic elements.

A2 Differences between digital and printed page layout outcomes

- Digital products:
  - interactivity
  - different content for different users – dynamic websites
  - usability and navigation – moving from page to page
  - responsive page layouts – how the page layout responds to different screen sizes and devices
  - page size is unconstrained
  - page elements – header, navigation, feature, body/content, sidebar, footer, background.
- Printed products:
  - physical product – tactile, texture, shape
  - printing effects, e.g. letterpress, embossing
  - constrained to the physical size and shape of the page
  - page elements – headlines, subheads, standfirst, bylines, jump lines, drop cap, captions, running head, pull quotes, folio.

A3 Purpose of page layout design

- Use of layouts to visually enhance message, narrative or subject matter of media products.
- Social, cultural and political economic factors affecting popular page layout in visual culture.
- Appeal to appropriate target audiences.
- Maintaining corporate context.

Learning aim B: Develop skills in page layout design techniques for digital and printed media products

B1 Constructing a new document

- Setting document preferences.
- Creating master pages and page templates.
- Establishing a baseline grid.
- Internal and external CSS style sheets.
- Responsive grid frameworks, e.g. Bootstrap.

B2 Working with text

- Styles:
    - paragraph, character and object styles in print media
    - style sheets in digital media
    - serif and sans serif typefaces.
- Typography:
    - print – font, weight, leading, tracking, kerning, word spacing
    - digital – font size, line height, font weight.
- Measurement scale – percentage, pixels, ems.
- Text frames:
    - creating and manipulating the shape of text frames
    - importing and editing text
    - using placeholder text
    - overflowing text
    - threading text through multiple columns.
- Wrapping text around objects.
- Web type – web-safe fonts, font replacement, font families, browser compatibility.

B3 Working with images and graphics

- Graphic frames:
    - modifying images and graphics within the frame
    - manipulating the frame and its contents both separately and together
    - using anchor points.
- Drawing and manipulating shapes.
- Captioning.

B4 Working with colour

- Printed page layout design:
    - CMYK colour, Pantone solid colour system, colour swatches
    - stroke, fill, gradients, transparencies.
- Digital page layout design:
    - hexadecimal codes, RGB colour values, color names
    - border, gradients, opacity.

Learning aim C: Produce page layouts for digital and printed media products

C1 Responding to the brief

- Platform:
  - o print
  - o digital
  - o moving image
  - o format and technical considerations.
- Purpose:
  - o inform
  - o promote
  - o educate
  - o entertain
  - o enhance corporate image.
- Intended message, narrative or subject matter.
- Audience demographics.

C2 Generating ideas for page layout design

- Establishing audience and purpose.
- Selecting appropriate formats.
- Sketching page layouts.
- Layout of page components – page comps, style guides/tiles, element collages.
- Mock-ups.
- Wireframes and prototypes for digital page layout and design.
- Selecting and preparing images:
  - o cropping, resizing in proportion
  - o image manipulation techniques and styling
  - o image optimisation.
- Creating and preparing graphics.
- Writing and editing copy/text.
- Audio/visual content.
- Interactive content.
- Saving in appropriate file formats.
- Organising assets – naming assets appropriately, using folders and subfolders.

C3 Creating page layout designs in print and digital formats

- Page structure:
  - o master pages and templates to position common elements
  - o multi-column layouts.
- Combining elements:
  - o aligning page elements
  - o creative use of design principles.
- Positioning techniques in digital design:
  - o absolute and relative positioning
  - o table layouts
  - o border, margin and padding.
- Consistency between digital and print formats.
- Testing onscreen and proofreading hard copies.
- Saving/exporting in appropriate file formats for the chosen platform.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand the principles of page layout design		
A.P1 Explain the principles and purposes of page layout design for digital and printed formats. **A.P2** Explain the differences between page layout design for digital and printed outcomes.	**A.M1** Analyse the principles, purposes and differences of page layout design for digital and printed formats.	**A.D1** Evaluate the principles, purposes and differences of page layout design for digital and printed formats.
Learning aim B: Develop skills in page layout design techniques for digital and printed media products		
B.P4 Demonstrate appropriate page layout design construction techniques. **B.P5** Demonstrate competent page layout design techniques using text, images, graphic and colour.	**B.M2** Demonstrate effective design techniques using text, images, graphics and colour.	**B.D2** Demonstrate accomplished use of design techniques, creatively using text, images, graphics and colour.
Learning aim C: Produce page layouts for digital and printed media products		
C.P5 Generate appropriate ideas for page layout designs in digital or printed formats, responding to a set brief. **C.P6** Produce competent page layout designs for digital or printed formats, responding to a set brief.	**C.M3** Generate effective ideas for page layout designs in digital or printed formats, creatively responding to a set brief. **C.M4** Produce effective page layout designs for digital or printed formats, creatively responding to a set brief.	**C.D3** Produce sophisticated page layout designs for digital or printed layouts, imaginatively responding to a set brief.

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P4, B.P5, B.M2, B.D2)

Learning aim: C (C.P5, C.P6, C.M3, C.M4, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- industry standard software (throughout the duration of teaching and learning)
- current publications (via a learning centre or online resources).

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will demonstrate a thorough understanding of the principles of page layout design, including a wide range of well-chosen print and digital media products under evaluation, including unconventional examples.

Learners will collate research, showing analysis and discussion and using the correct subject terminology and appropriate referencing. For example, they will compare and evaluate production processes and features across digital and printed formats and their discussion will focus on how specific design principles have been adopted or rejected to meet the needs of a specific audience and purpose.

For merit standard, learners will analyse how common design principles have been used in the chosen examples across the range of print and digital media products selected. For example, they will compare and analyse production processes and features across digital and printed formats, mentioning how specific design principles have been adopted to meet the needs of audience and purpose.

For pass standard, learners will describe at least one print and one digital media product, explaining how common design principles have been used in the chosen example(s). They will competently explain the differences between digital and print page layout designs in the examples referred to.

Learning aim B

For distinction standard, learners will use accomplished design techniques to construct a page layout. They will demonstrate how to combine text, images, graphics and colour together into effective page layout designs across printed and digital formats.

Learners will show imagination, creativity and technical competence in their experimentations with relevant software. They will clearly demonstrate the techniques and processes undertaken and there will be clear evidence of experiments being purposeful and alternative ideas being explored. For example, learners will develop different layouts from one idea arising from the experimentation with different design principles, tools and techniques. Their outcomes, and production process used, will be evaluated and suggestions for future improvement will be valid, thoughtful and clearly expressed.

For merit standard, learners will use effective techniques to construct a page layout, combining text and images together into designs for both printed and digital formats.

Learners will show some creativity and technical competence in their experimentations with relevant software. They will demonstrate the techniques and processes undertaken and there will be evidence of experiments being purposeful. For example, learners will develop layouts using appropriate design principles, tools and techniques. Their outcomes, and the tools and techniques used, will be analysed, and suggestions made for future improvement will be appropriate.

For pass standard, learners will use appropriate design techniques to construct a page layout. They will use these to combine text and images together into page layout designs, although these will typically only be for either printed or digital formats.

Learners will show limited creativity and technical competence in their experimentations with relevant software. They will demonstrate the techniques and processes undertaken and there will be some valid evidence of experiments being purposeful. For example, their layouts will be developed using appropriate tools and techniques and explained in some detail.

Learning aim C

For distinction standard, learners will generate detailed ideas in response to the requirements of the brief. They will design evidence to take more than one form and it will be executed to imaginatively demonstrate the creative possibilities envisaged by learners, for example innovative sketches of different page layouts and thoughtful style guides carefully tailored for printed or digital layout designs.

Learners will create page layout designs demonstrating sophisticated technical competence, creativity and accomplishment. Their final products will be saved/published in all required formats (print or online file types) and they will provide evidence of the testing stages of the finalised file types. Their final page layout designs, in printed or digital formats, will complement each other and will hold obvious appeal to the specified audience through the skilful adoption of design principles and techniques. Learners will clearly demonstrate the production process, showing all stages of production.

For merit standard, learners will generate ideas in response to the requirements of the brief with consideration and in some detail. They will make effective use of common design principles, for example considered page comps for printed or digital layout designs.

Learners will create page layout designs, demonstrating a good level of technical competence and some creativity. Their final products will be saved/published in all required formats (print or online file types) and the testing stages of their finalised file types will be evidenced. Their final page layout designs, in printed or digital formats, will be suitable for the specified audience through the deliberate use of design principles and techniques. Learners will demonstrate the production process, showing most of the stages of production.

For pass standard, learners will generate ideas in response to the requirements of the brief but with limited consideration and a lack of detail. They will make basic use of common design principles, for example providing simple sketches of printed or digital layout designs.

Learners will create page layout designs demonstrating a reasonable level of technical competence yet limited creativity. Their final products will be saved/published in all required formats (print or online file types) and the testing stages of their finalised file types will be evidenced. Their final page layout designs, in printed or digital formats, will demonstrate a limited awareness of the specified audience. Learners will demonstrate the production process, showing some of the stages of production.

Links to other unit

This unit links to:
- Unit 14: Digital Magazine Production
- Unit 27: Digital Photography
- Unit 29: 2D Digital Graphics
- Unit 33: 2D Animation.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities to do so.

This unit would benefit from employer involvement in the form of:
- guest speakers and interview opportunities
- opportunities to visit suitable exhibitions.

Unit 31: Coding for Web Based Media

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners develop the skills required to build web-based media texts by combining the three main coding languages used in web design: HTML, CSS and JavaScript.

Unit introduction

Have you ever wondered what drives an interactive web-based media product? Modern web-based products combine different coding languages to produce interactive products that respond to the screen size, platform and orientation of the user's device. Knowing how to write and edit HTML and CSS is essential if you are going to create attractive and fully functioning web-based media texts. In this unit, you will develop the ability to combine HTML, CSS and JavaScript effectively.

JavaScript is the programming language that makes web pages more interactive by responding to the user. In this unit, you will learn how to write JavaScript and incorporate it into your web-based products so that they can be accessed and modified while being viewed in a web browser. Furthermore, you will develop the practical skills and understanding to incorporate interactive content into your web-based products, such as audio and video content, JavaScript content panels, APIs and contact forms.

Understanding how to write and edit HTML, CSS and JavaScript will expand your creative capabilities, enabling you to not only design imaginative web-based products but also to make them interactive and responsive. A robust knowledge of the coding languages that drive the modern web will deepen your understanding of the process of developing products for the web, which is much sought after within the creative industries. The ability to write HTML, CSS and JavaScript will enable you to progress to higher education, training and employment in a wide variety of sectors.

Learning aims

In this unit you will:

A Understand how to write and edit JavaScript

B Investigate how HTML and CSS are used to build web-based products

C Create an interactive web-based product.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand how to write and edit JavaScript	**A1** Writing JavaScript statements and organising them into code blocks **A2** Using JavaScript to access and change HTML elements with the HTML DOM (Document Object Model) **A3** Error handling and debugging	An illustrated report with detailed examples of how JavaScript code is written, how it is applied to a web page, how it works in a browser and how errors can be fixed. The report should be presented in an appropriate format, for example blog or e-portfolio with links to the examples.
B Investigate how HTML and CSS are used to build web-based products	**B1** Using HTML to create web-based products **B2** Using CSS to control the styling and layout of web-based products **B3** How to add multimedia assets to a web page	A web page produced in response to a brief with multimedia content. A record and evaluation of the process of production, for example annotated screenshots, annotated code, screen recordings, production logs, audio/video diaries.
C Create an interactive web-based product	**C1** The development process **C2** Adopt responsive web design techniques **C3** Add interactivity to web pages through JavaScript **C4** Incorporate Application Programming Interfaces (APIs) into a web page **C5** Validate forms using JavaScript	A responsive web page produced in response to a brief, incorporating interactive content. A record of the process of production, for example annotated screenshots, annotated code, screen recordings, production logs, audio/video diaries.

Content

Learning aim A: Understand how to write and edit JavaScript

A1 Writing JavaScript statements and organising them into code blocks

- Using the HTML script element to insert JavaScript or link to JavaScript files.
- Writing JavaScript statements:
  - values – writing the correct syntax for numbers, strings and expressions
  - variables – declaring variables and assigning them values
  - operators – assignment, arithmetic, string, comparison and logical operators
  - keywords – identifying the JavaScript action to be performed
  - comments – writing single-line and multi-line comments
  - data types – numeric, string, Boolean, undefined, null, object
  - arrays – creating an array, values in arrays, accessing and changing values in an array
  - expressions – assigning a value to a variable, assigning multiple values to return a single value
  - variable scope – local and global variables.
- Using functions, methods and objects.
- Controlling the flow of data through decisions and loops:
  - decisions – using comparison and logical operators
  - conditional statements – using if…else statements and switch statements
  - loops and loop counters.

A2 Using JavaScript to access and change HTML elements with the HTML DOM (Document Object Model)

- How JavaScript is used in web-based media.
- Access and change elements through the document, element, attribute and text nodes.
- Respond to events by updating the content of the page, e.g. UI events, keyboard events, mouse events.

A3 Error handling and debugging

- Use the browser's developer tools and the JavaScript console to debug the script to fix errors.
- Write error-handling code, e.g. try, catch, finally statements.

Learning aim B: Investigate how HTML and CSS are used to build web-based products

B1 Using HTML to create web-based products

- Declaring DOCTYPES to inform web browsers which version of HTML is being used.
- Write HTML elements to describe the structure of web pages – opening and closing tags, adding comments, id attribute, class attribute.
- Grouping elements – div element and span element.
- Using the meta tag for search engine optimisation.
- Writing mark-up for text – headings, paragraph, bold, italic, line break, horizontal rule.
- Using HTML lists – ordered, unordered and definition.
- Creating links – internal, external and email.
- Adding images to web pages – src, alt, title, height, width, figure, figure caption.
- Representing information in a table.
- Creating a form – form controls, including HTML5 form elements.

B2 Using CSS to control the styling and layout of web-based products

- Writing internal and external CSS – linking to external style sheets and using the style element for internal style sheets.
- Writing CSS rules to control how the content of specified elements are displayed – selectors and declarations, adding comments.
- Using CSS selectors – universal selector, type selector, class selector, id selector, child selector, descendant selector, adjacent sibling selector, general sibling selector.
- Adding colour – foreground and background.
- Specifying colour through RGB values, hex codes, colour names and HSL properties.
- Specifying opacity through the opacity, RGBA and HSLA properties.
- Styling text – font-family, font-size (using pixels, percentages and ems), font-weight, font-style, text-transform, text-decoration, line height, letter-spacing, word-spacing, text-align, vertical-align, text-indent, text-shadow and pseudo-elements, e.g. first-letter.
- Styling links – link, visited, hover, active, focus.
- Styling images – size and alignment, background images, image rollovers and sprites, gradients.
- Styling boxes – dimensions, overflow, border, margin, padding, display, visibility, shadow, rounded corners.
- Styling lists, e.g. bullet point styles and position.
- Styling tables, e.g. cell padding, distinguishing headings, aligning numerals, altering gaps between cells, controlling borders and shading rows.
- Styling forms, e.g. text inputs, text areas, submit buttons and labels.
- Controlling page layout – positioning elements through normal flow, relative positioning, absolute positioning, overlapping and floating elements.
- Setting up web pages with fixed and liquid layouts.
- Using HTML5 layout elements – header, nav, section, article, aside, footer, heading groups.

B3 How to add multimedia assets to a web page

- Adding Flash movies to a web page, e.g. animations, audio and video.
- Adding audio or video to a web page using a hosted service, e.g. SoundCloud, YouTube or Vimeo.
- Adding audio to a web page using the HTML 5 audio element:
  - using the source element – converting audio files to appropriate formats and supplying audio in more than one format
  - using audio attributes, e.g. preload, controls, autoplay, loop.
- Adding video to a web page using the HTML 5 video element:
  - using the source element – converting video files to appropriate formats and supplying videos in more than one format
  - using video attributes, e.g. preload, poster, width and height, controls, autoplay, loop.

Learning aim C: Create an interactive web-based product

C1 The development process

- Understanding the requirements of a design brief.
- Combining HTML and CSS code:
  - page structure
  - adding content
  - positioning elements
  - page layout and design.
- Incorporating interactive elements within the page.
- Testing usability and functionality.
- Responding to the testing evidence.

C2 Adopt responsive web design techniques

- Create responsive page layouts, e.g. with CSS3 media queries or JavaScript.
- Work with images to resize images proportionally.
- Enable users to select content by showing or hiding content.

C3 Add interactivity to web pages through JavaScript

JavaScript content panels:

- accordion – when the user clicks on the title of an accordion, the panel expands to reveal the content
- tabbed panel – when the user clicks on one of the tabs, the panel changes to show the corresponding panel
- modal window – when the user clicks on the link, a hidden panel appears in front of the rest of the content on the page
- image gallery – when the user clicks on the thumbnail image, the main image is replaced by the new image
- responsive slider – images slide from one to the next in a panel, either automatically or as the user navigates between them.

C4 Incorporate application programming interfaces (APIs) into a web page

- HTML5 APIs, e.g. geolocation.
- Scripts with APIs, e.g. JQuery plugins.
- Platforms, e.g. Google maps API, Twitter® feed or Facebook® comments.

C5 Validate forms using JavaScript

- Add a form to the web page, e.g. username and password, a poll, a contact form.
- Add form validation to provide feedback to the user.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand how to write and edit JavaScript		
A.P1 Explain how JavaScript is written with relevant examples, including examples of accessing and updating the DOM tree. **A.P2** Explain how to handle errors and debug JavaScript.	**A.M1** Analyse the syntax of the JavaScript programming language and how it interrelates to the DOM through detailed examples. **A.M2** Analyse how appropriate browser tools and coding techniques can handle errors and debug JavaScript.	**A.D1** Evaluate how the JavaScript programming language is effectively integrated within web design practices and processes, through detailed and pertinent examples.
Learning aim B: Investigate how HTML and CSS are used to build web page		
B.P3 Explain how HTML and CSS coding techniques are used to produce a functioning web-based product. **B.P4** Insert audio or video content onto a web-based product and include functioning controls.	**B.M3** Analyse how HTML elements and CSS rules are used to produce functioning and user friendly web-based products with integrated audio or video content.	**B.D2** Evaluate how HTML and CSS rules combine to produce functioning, consistent and user friendly web-based products with integrated audio and video content.
Learning aim C: Create an interactive web-based product		**C.D3** Combine advanced coding techniques in HTML, CSS and JavaScript to produce an original web-based product that is fully responsive and user-friendly; with a range of imaginative and engaging interactive content that significantly enhances the user experience.
C.P5 Produce a partially responsive web-based product with functioning JavaScript content and a functioning API. **C.P6** Produce a web-based product with basic form validation.	**C.M4** Produce a responsive web-based product using HTML, CSS and JavaScript coding techniques to integrate interactive content, an API and form validation.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section* 6 gives information on setting assignments and there is further information is on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.M2, A.D1)

Learning aim: B (B.P3, B.P4, B.M3, B.D2)

Learning aim: C (C.P5, C.P6, C.M4, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- a computer with internet access
- appropriate web design software or text editor
- image manipulation software
- a modern web browser
- different platforms, e.g. PC, Mac, tablets and mobile phones.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will present a balanced evaluation of how JavaScript is integrated within HTML pages. The different uses of JavaScript will be explored through detailed and pertinent examples. Learners will use the correct JavaScript programming terminology in an accurate and fluent response.

For merit standard, learners will analyse the syntax of JavaScript to demonstrate how JavaScript statements are composed and how the HTML DOM allows JavaScript to find and change HTML elements, for example swap images or colours, and react to events such as when a user clicks the mouse. The analysis will draw on detailed examples to demonstrate how JavaScript works within an HTML page and how different browser developer tools and the JavaScript console can be used to handle errors and debug JavaScript. There will be few inaccuracies relating to specific JavaScript programming terminology and the response will be easy to understand.

For pass standard, learners will include a clear explanation of how JavaScript statements are written and how JavaScript is incorporated within an HTML page. Learners should include examples of JavaScript, such as the JavaScript to display the date and time, and explain how these examples function. There should be an explanation of how JavaScript can be used to access the HTML DOM and change HTML elements through simple but appropriate examples, and there should be an explanation of error handling and how to debug JavaScript. There may be some inaccuracies relating to specific JavaScript programming terminology and the response may be difficult to follow in places, but, overall, learners will provide a series of clear examples that demonstrate how to produce functioning JavaScript.

Learning aim B

For distinction standard, learners will evaluate the process of producing a web page or web pages that combine HTML and CSS code imaginatively. The combination of HTML elements and CSS rules will produce an appropriate structure with consistent layout and design, demonstrating effective control over the positioning and alignment of the text and images and overall presentation of the content.

There will be evidence of the advanced use of HTML, for example to add appropriate metadata and to structure content through headings, paragraphs, lists, alternate text, titles and figure captions. It is unlikely that the page layout will be controlled by a table but a table could be used to present information, for example tour dates. It is likely that learners will adopt HTML5 layout elements to good effect. HTML form elements will be used to create a form, which will be validated using JavaScript to provide meaningful feedback to the user. A variety of functioning links will also be evident, for example internal, external and email links.

Similarly, learners will use CSS coding to style and position elements on the page successfully, for example to establish an effective colour scheme, a noticeable hierarchy of information and the consistently effective styling of text, images, links, lists, boxes, tables and forms.

Audio and video content will be added using the HTML5 audio and video elements and a combination of attributes will be used that enable the user to control the video and audio content.

For merit standard, learners will analyse the process of producing a web page or web pages that combine HTML and CSS code to good effect. The web page(s) must be viewable through a web browser. The <meta> tag will be used to add metadata about the HTML document. There will be evidence of the effective use of a range of HTML elements, which should include writing HTML mark-up for adding text, images, lists and a form to the web page(s). At least one functioning internal link and one functioning external link should be included in the HTML. Although the CSS can be internal or external, learners will use CSS code to style and position a range of content on the web page(s) effectively, in such a way that it creates a user-friendly web page(s), for example consistent styling for text and links, effective styling added to lists, boxes, tables, and forms and CSS positioning techniques used to create interesting page layouts, for example the use of columns.

Learners will integrate audio or video into the web page(s), there should be evidence of video or audio content from either a hosted service or embedded onto the page using the HTML5 audio and/or video element; video or audio attributes will be used to enhance the multimedia content, for example adding controls or auto play.

For pass standard, learners will explain the process of producing a web page or web pages that combine HTML and CSS code. The web page(s) must be viewable through a web browser. There will be evidence of the appropriate use of HTML elements for adding images and information to the page(s), for example adding alternate text for an image and using HTML headings. At least one functioning link should be included (one internal, external or email link is acceptable) in the HTML. Although the CSS can be internal or external, learners will use appropriate CSS code to style both text and images on the page(s). The outcome may not be consistent but there will be appropriate evidence of CSS code being used to style and position content on the page. Learners will insert audio and/or video into the web page(s), which could be Flash content, content from a hosted service or embedded onto the page; the audio and video should have suitable controls to stop and start the audio and video content.

Learning aim C

For distinction standard, learners will produce suitable evidence that HTML, CSS and JavaScript have been combined together to create an imaginative web page(s). It is not acceptable for learners to use third party templates as the basis for their web page(s). The web page(s) will be fully responsive and all of the elements on the page will significantly enhance the user experience.

Learners will included interactive content within the web page(s), sized and positioned effectively. Both an API and an interactive JavaScript content panel will be incorporated within the web page(s), both of which are user friendly, hold imaginative content and are consistent with the page layout and design.

For merit standard, learners will produce responsive web page(s) when viewed on a mobile device. At least one functioning interactive element will be included on the web page(s) using JavaScript and at least one API will function appropriately. These interactive elements will enhance the user experience due to their relevant content, positioning and integration within the page, for example a suitably sized responsive image slider placed prominently within the page, featuring high resolution images with impact. Learners will use JavaScript form validation to check different aspects of the form data, for example if the user has left a required field empty or entered an invalid email address – and return a suitable message to the user.

For pass standard, learners will produce evidence that the web page(s) has some responsive elements, for example when the web page is viewed in a smaller browser window or mobile device, some of the page content will respond, so the images will resize proportionally. Learners will include at least one functioning interactive element on the web page(s) using JavaScript, for example an image gallery or tabbed panel, although the content may not be complete or wholly relevant. At least one functioning API will be included on the web page(s) and learners will use JavaScript form validation to check at least one aspect of the form data and return a suitable message to the user.

Links to other units

This unit links to:

- Unit 12: Website Production
- Unit 28: Image Manipulation Techniques.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:

- guest speakers
- opportunities to visit suitable exhibitions.

Unit 32: Concept Art for Computer Games

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners investigate and explore drawing and visualisation techniques to create conceptual art for computer games.

Unit introduction

Games design is an ever expanding and evolving industry. You can now play games on your mobile phone and home computer as well as the more traditional games consoles and arcade machines. A vital part of gaming is its use of imagery to inform, excite or suspend disbelief during game play.

The focus of this unit is on drawing and visualisation. You will use a range of formal elements to communicate messages and meanings through conceptual art for games design. A vital part of this is the ability of the conceptual artist to communicate their vision to animators, creative directors, writers, marketing staff and others involved in the development and production process of gaming.

The technical skills and understanding you will develop in this unit are key skills required in the games design industry. The concept art you create can form part of a portfolio of work for progression to employment or higher education.

Learning aims

In this unit you will:

A Understand media, techniques and processes for concept art for games

B Develop ideas for concept art for a digital game

C Produce concept art for a digital game for a specific audience and purpose.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand media, techniques and processes for concept art for games	**A1** Purpose of concept art **A2** Characteristics of concept art **A3** Drawing and visualising media, techniques and processes	Visual report with examples of: • concept art for games design • own exploration into drawing and idea generating techniques and processes.
B Develop ideas for concept art for a digital game	**B1** Conceptual development of ideas in response to a brief **B2** Visual development of ideas in response to a brief **B3** Evaluating and reflecting on work in progress	Logbook showing development of selected idea into final concept art. Presentation of final concept art. An evaluation of ideas and outcomes based on feedback, review and reflection.
C Produce concept art for a digital game for a specific audience and purpose	**C1** Produce final concept art **C2** Present concept art for game design	Logbook showing development of selected idea into final concept art. Presentation of final concept art. An evaluation of ideas and outcomes based on feedback, review and reflection.

Content

Learning aim A: Understand media, techniques and processes for concept art for games

A1 Purpose of concept art

- To give visual messages and meaning to characters, components, objects, environments, game scenarios.
- To visualise concepts and ideas, styles, moods, narrative, atmosphere.
- To fulfil creative and commercial requirements, e.g. client, target audience, historical, cultural, social, political and ethical influences.
- To pitch, to present to internal and external game design stakeholders.

A2 Characteristics of concept art

- Restrictions and opportunities of visual detail required for different gaming platforms, e.g. mobile, console.
- Use of media and materials, including for sketching, drawing and painting.
- Manipulate visual language, including colour, texture, shape, perspective.
- For different gaming genres, e.g. simulation, strategy, sports.
- Targeting specific audiences by gender, age, type of gamer, e.g. casual, hardcore.

A3 Drawing and visualising media, techniques and processes

- Wet and dry drawing media, including pencils, paints, ink.
- Drawing techniques, e.g. tonal drawing, line drawing, cross-hatching.
- Painting techniques, e.g. painting with washes, stencils, layers.
- Processes, e.g. drawing, painting, mixed media drawing.
- Visual properties of mark-making techniques, including rough, soft, wet.

Learning aim B: Develop ideas for concept art for a digital game

B1 Conceptual development of ideas in response to a brief

- Analysis of brief requirements and constraints.
- Research and record primary and secondary influences relating to the brief and concept art:
  - mood boards or brainstorms relating to, for example key words, backstory
  - visual references, for example scenes, characters, objects from gaming and from other media
  - visual styles, for example photorealist, cartoon, abstract.

B2 Visual development of ideas in response to a brief

- Preparation and practice:
  - anatomical drawing or portraiture for characters
  - still life for objects and natural forms
  - observational drawings for architecture, environment or levels.
- Exploratory thumbnails, development sketches, mock-ups.
- Colour study tests for colour schemes around theories, mood, feeling.

B3 Evaluating and reflecting on work in progress

- Recording and acting on feedback to develop ideas:
  - teachers, peers, client, potential users, through social media.
- At key stages of project development – researching, visual development, production.
- Review own ideas against brief requirements before beginning development and production.
- Justifications for each key decision made and lessons to be learned for this or next stage of project.

Learning aim C: Produce concept art for a digital game for a specific audience and purpose

C1 Produce final concept art

- Plan the final production process to meet the requirements of the brief, e.g. deadlines.
- Idea selection to refine and complete concept art that communicates messages and meaning to a specific audience through:
  - selecting and manipulating visual language such as shape, texture, perspective, lighting to create appropriate visual style
  - applying appropriate tools and techniques to concept artwork
  - adding and excluding detail for refinement of concept art
  - production of a final concept art using appropriate materials, tools and techniques
  - quality control checking and recording against industry standards.

C2 Present concept art for game design

- Present concept art appropriately, e.g. storyboards, layout, presentation boards.
- Presentation content, e.g. supporting text, titles, close-ups, different views of object, character, environment.
- Formats of presentation of work, e.g. print portfolio, online folio.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Understand media, techniques and processes for concept art for games			
A.P1 Explain the purpose and characteristics of concept art for one genre of game. **A.P2** Explain how media techniques and process communicate messages and ideas through the concept art of a game.	**A.M1** Analyse the characteristics of concept art for games targeting specific audiences across different genres. **A.M2** Analyse how media, techniques and processes are used to communicate ideas and messages in games design across different gaming genres.	**A.D1**	Evaluate the suitability of media, techniques and processes used to communicate complex ideas and messages across gaming platforms, genres and audiences.
Learning aim B: Develop ideas for concept art for a digital game		**B.D2**	Demonstrate creative and sustained ideas development for concept art which are supported by detailed and insightful reflection and analysis of own practice and use of media, techniques and processes.
B.P3 Propose an idea for concept art for a digital game through research and understanding of the brief. **B.P4** Show the visual development of an idea for concept art and explain how feedback has influenced that development.	**B.M3** Explore ideas for concept art through appropriate research. **B.M4** Analyse the influence of evaluation and feedback in recording the visual development of ideas.		
Learning aim C: Produce concept art for a digital game for a specific audience and purpose		**C.D3**	Demonstrate innovative use of media, techniques and processes in the production and professional presentation of final concept art for specific audience and purpose.
C.P5 Apply appropriate media, techniques and processes in the production and presentation of final concept art for specific audience and purpose.	**C.M5** Demonstrate creative use of media, techniques and processes in the production and presentation of appropriate final concept art for specific audience and purpose.		

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aims A (A.P1, A.P2, A.M1, A.M2, A.D1)

Learning aim: B (B.P3, B.P4, B.M3, B.M4, B.D2)

Learning aim: C (C.P5, C.M5, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- art studio equipment, including dry media and materials, e.g. pencils, pens, rulers, and wet materials, e.g. paints and inks
- computer hardware
- computer software, e.g. drawing and image manipulation software
- scanners, printers and cameras.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will select unexpected and high-quality concept art from different gaming platforms, genres and target audiences, including concept art that uses traditional and non-traditional media and materials. Learners will provide a detailed analysis of the suitability of the media, techniques and processes used to communicate complex ideas and messages in these concept art examples. Learners' informed, qualitative judgement is important, as is an in-depth comparison across the different concept art examples, evaluating the effectiveness of how and why purpose has been met in some concept art and not in others. They will also evaluate how the visual properties of mark making communicate ideas and messages, for example a series of increasing spaced lines using a fine liner brush applied to a wet media denotes skilful light movements. Learners' use of technical language will be correct and appropriate.

For merit standard, learners will analyse the characteristics of concept art targeting specific gaming audiences, including the identification of how genres of games appeal to audiences. They will use quality examples of concept art to analyse how visual elements, such as shape and form may be influenced by a target platform's limitations and opportunities, for example how the visual detailing in a piece of concept art has been influenced by the size of the platform's screen, such as in a game for a mobile phone. Learners will also analyse how media, techniques and processes are used to communicate ideas, comparing concept art from at least two genres and including concept art that uses a broader range of visual properties such as wet and dry media. Learners' ideas and messages will have some complexity and they will identify direct links among concept art ideas and messages and the media, techniques and processes used. However, at merit standard, learners will not have to support this work with qualitative judgements.

For pass standard, learners will explain the general purpose and characteristics of concept art, including an example from one genre of game, to provide a specific example of concept art purpose and characteristics. Their explanations may not go beyond the obvious and expected, such as, 'The main purpose of this concept art character is to provide humour in a strategy game targeted at male, teenage hardcore gamers.' They will also explain how messages and ideas are generally communicated in concept art through the use of visual language and media, techniques and processes used. The game selected may be a popular and much discussed game and the concept art selected may use a limited range of media, techniques and processes. Learners will describe the media, techniques and processes used, generally with correct technical language.

Learning aim B

For distinction standard, learners will demonstrate a creative and sustained development of ideas for concept art. They will source content from high-quality primary and secondary sources, including from highly reputable concept artists, which are then analysed in detail. Learners will show influence from visual styles, colours, techniques or processes, at least partially integrating them into their own concept art ideas, or using them to inform their own developmental work. They will underpin all aspects of the development of ideas with critical reflection and this will be used to improve and inform the quality of each stage of the process. As such, learners will use the advanced skills obtained from still life, anatomical, portrait or observational drawings constructively in the generation of exploratory and developmental sketches.

For merit standard, learners will explore and visually develop ideas for concept art, informed by appropriate research and a proactive response to feedback. They will use content sourced from primary and secondary sources to generate a range of ideas which may range in quality from, weak, initial ideas to thoughtful and considered ideas for the target audience and genre. However, learners' visual development of the chosen idea(s) will be inconsistent, although it will demonstrate an increasingly deliberate and confident use of drawing in preparation and practice, and in the developmental sketches and thumbnails. Their annotations to accompany these will be insightful and, at times, reflective, for example, 'I used this colour and thickness of line to reflect the dark personality of the character but this could be improved further by using charcoal rather than pencil as it has a darker line.' Feedback from others will be thoughtfully considered and explored and the review of own decisions will be an embedded part of the development process.

For pass standard, learners will propose an idea for concept art for a digital game through research and understanding of the brief that is then visually developed, partially in response to feedback from others. Learners will source content appropriate for the brief and containing primary and secondary sources, although probably predominantly secondary research that is either very well known or mainly from, for example visual blogs and websites in which the concept artist or game is unknown or unverified. Learners' proposed ideas will be derived from existing games and concept art, although not directly copied. Their visual development of this idea into concept art will be supported by preparation and practice such as anatomy drawing for characters and still life for objects that uses basic drawing and visualising media and techniques such as shading with pencils. Learners' annotations will be obvious but this, as with feedback from others, will be recorded at all key stages of the project.

Learning aim C

For distinction standard, learners will produce and present final concept art that demonstrates innovative and unexpected use of media, techniques and processes and will be channelled into targeting a specific audience and purpose. Their use of visual language will challenge conventions of the genre. Learners will ensure that concept art objects, characters or environments will appear proportionally and spatially consistent or correct for purpose, i.e. if trees are intended to have larger and wider branches than in nature to create a message of fear, they are consistently and intentionally so. They will use media, techniques and processes that are extended beyond what would normally be expected from the intended audience. Learners will provide evidence of effective time planning to meet all brief requirements successfully and will produce a final presentation that includes, for example multiple views, action shots, expressions or alternative camera angles, alongside colour schemes and layout that communicate mood and atmosphere in a sophisticated manner.

For merit standard, learners will produce and present appropriate final concept art for specific audience and purpose, underpinned by a creative use of media, techniques and processes which goes beyond that expected to communicate messages and meanings. They may include in the production of concept art a combination of digital and traditional materials and techniques, for example taking a drawing that uses line expressively to illustrate weight or strength that is then scanned and modified for further emphasis digitally. Their manipulation of visual language, such as shape, colour and texture, to create a visual style, will be more advanced although there might be obvious proportional or spatial distortions in the final concept art that prevent it extending into a distinction. Learners will provide evidence of effective time planning to ensure that all the key requirements of the brief are met and will produce a final presentation that includes a layout with detail, for example a front, side and back view of a character with close-up on their expressions alongside detailed text and colour schemes presentation.

For pass standard, learners will produce and present final concept art for a specific audience and purpose. Their manipulation of visual language such as line, colour and texture will be basic and expected but appropriate for the visual style of the genre and the purpose. As such, learners' visual style will be obvious and derivative, such as a Magna-like character that does not extend beyond the clichés of that style and genre. They will provide evidence of use of media, techniques and processes appropriate to intention, for example dark washes being used for stormy skies, and of some planning to meet brief requirements, although time management may have limited some sections of the production and presentation, such as final quality checking, for example, resulting in distortions or bitmapping of artwork if printed digitally. Learners' presentations of the final concept art will generally be appropriate, such as a presentation board of a character with front and back views and with some basic supporting text.

Links to other units

This unit links to:
- Unit 34: Games Engine Scripting
- Unit 37: Visual Effects.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities to do so.

This unit would benefit from employer involvement in the form of:
- guest speakers
- opportunities to visit suitable exhibitions.

Unit 33:   2D Animation

Level: **3**
Unit type: **Internal**
Guided learning hours: **60**

Unit in brief

Learners will explore the purposes and technical characteristics of 2D animation, developing skills in these techniques and creating a final 2D animated product.

Unit introduction

2D animation is used for a variety of purposes across a number of media sectors, including narrative animation for entertainment, information, advertising, music videos, games cutscenes, animated web content and interactive interface elements.

In this unit, you will learn about the different techniques and uses of 2D animation. You will develop skills in digital 2D animation tools and create a final 2D animation for use in a media product.

The skills you will develop in this unit can be applied to digital animations for a range of different purposes, and the 2D animation you produce for this unit can form part of a digital portfolio of work for progression to employment or higher education.

Learning aims

In this unit you will:

A Examine the purposes and techniques of 2D animation used in the media industry

B Explore the use of 2D animation tools and techniques for a specific media product

C Create a digital 2D animation for a specific media purpose using industry techniques.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Examine the purposes and techniques of 2D animation used in the media industry	**A1** Purposes of digital 2D animation **A2** The development of 2D animation techniques **A3** The characteristics of 2D animation techniques	A report examining traditional and digital examples of the purposes, techniques and characteristics of 2D animation.
B Explore the use of 2D animation tools and techniques for a specific media product	**B1** Digital 2D animation tools **B2** Digital 2D animation techniques	Two fully developed ideas for a digital 2D animation, demonstrating the use of different tools and techniques and supported by an annotated ideas development portfolio, including initial ideas and experimentation.
C Create a digital 2D animation for a specific media purpose using industry techniques	**C1** Planning a digital 2D animation **C2** Producing a digital 2D animation **C3** Evaluating a digital 2D animation	A planning and production log, including a schedule, asset management and evaluating the creative and technical choices made throughout. A final 2D animation published for a specific media purpose.

Content

Learning aim A: Examine the purposes and techniques of 2D animation used in the media industry

A1 Purposes of digital 2D animation

General purposes of 2D animation in the media industry:

- entertainment
- information
- advertising
- education.

A2 The development of 2D animation techniques

- Optical illusion of motion (persistence of vision) – rudimentary traditional animation techniques, including thaumatrope and flick books.
- Sequencing photographic stills to create animation.
- Traditional frame by frame cell animation.
- Combining animation and live action.
- Rotoscoping – traditional and digital.
- Digital animation.

A3 The characteristics of 2D animation techniques

- Production characteristics of different techniques:
  - frame by frame animation
  - cell tracing/onion skinning
  - keyframing.
- Comparing visual characteristics:
  - basic vector shapes
  - photorealistic
  - flat colour
  - graduated tones
  - calligraphic hand drawn appearance.
- Technical characteristics of digital 2D animations:
  - frame rate
  - compression – file size, download speeds
  - vector animation
  - raster (bitmap) animation
  - animation file formats, including animated gifs, shockwave and flv files, CSS3 for HTML5.

Learning aim B : Explore the use of 2D animation tools and techniques for a specific media product

B1 Digital 2D animation tools

- Bitmap and vector drawing and painting tools.
- Bitmap to vector conversion.
- Symbols and instances.
- Text tools.
- Frame by frame animation.
- Key frames.
- Onion skinning.
- Tweening.
- Importing external assets.
- Effects.

- Interactivity – scripting, triggers, behaviours, actions.
- Sound.
- Creating preloaders.

B2 Digital 2D animation techniques

- Basic animation techniques, including animatics, sequencing still images and limited animation.
- Advanced animation techniques, including walk cycles, lip syncing and rotoscoping.

Learning aim C: Create a digital 2D animation for a specific media purpose using industry techniques

C1 Planning a digital 2D animation

- Ideas generation, brainstorming, thumbnail sketches.
- Analysis of brief, including target audience and any client, production and technical constraints.
- Influence of examples of current or historical 2D animation.
- Legal and ethical issues.
- Scheduling and production milestones.
- Developing narrative.
- Developing assets – characters, backgrounds, soundtrack.
- Trial animations or animatics.

C2 Producing a digital 2D animation

- Setting up the timeline.
- Asset management.
- Importing and using assets.
- Animating image assets.
- Adding scripts.
- Publishing the digital animation for use in a media product.
- Time management.

C3 Evaluating a digital 2D animation

- Creative decisions and how they are influenced by contemporary practice.
- The techniques used.
- The constraints of the brief, including suitability for the intended purpose and platform.
- Audience response – intended and actual.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Examine the purposes and techniques of 2D animation used in the media industry		**A.D1**	Evaluate examples of traditional and digital 2D animation to show the development of different techniques and their effectiveness in fulfilling different purposes.
A.P1 Explain the purposes of 2D animation across media sectors. **A.P2** Explain the characteristics and development of digital 2D animation techniques.	**A.M1** Analyse examples to show the purposes, characteristics and development of different digital 2D animation technique.		
Learning aim B: Explore the use of 2D animation tools and techniques for a specific media product		**B.D2**	Demonstrate a creative approach when using digital 2D animation techniques to develop sophisticated ideas for a digital 2D animation in response to a brief.
B.P3 Demonstrate the use of different digital 2D animation tools and techniques for digital 2D animations.	**B.M2** Develop skills in the effective use of digital 2D animation tools and techniques to develop different ideas for a digital 2D animation in response to a brief.		
Learning aim C: Create a digital 2D animation for a specific media purpose using industry techniques		**C.D3**	Plan and produce a final 2D animation for a specific media product demonstrating accomplished technical skills and justifying the creative choices made.
C.P4 Plan and produce a final 2D animation for a specific media product in response to a brief. **C.P5** Explain the creative choices made when developing a digital 2D animation for a specific media purpose.	**C.M3** Plan and produce a final 2D animation for a specific media product demonstrating competent technical skills. **C.M4** Evaluate the creative choices made and the appropriateness of tools and techniques used when developing a digital 2D animation for a specific media purpose.		

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.M2, B.D2)

Learning aim: C (C.P4, C.P5, C.M3, C.M4, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- digital still cameras
- digital video cameras
- scanners
- digital drawing tablet
- computers
- appropriate drawing, painting and 2D animation software
- internet access
- traditional drawing materials
- lightbox.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will select different techniques and evaluate their effectiveness when applied to different purposes. The purposes selected may be the same or different for each technique analysed. Although the selection of purposes may relate to a specific media sector, learners will justify the selection process and, in doing so, they will demonstrate an awareness of the use of digital 2D animation in different media sectors. Learners will evaluate examples of both traditional and digital 2D animation for the specified purposes, clearly showing how the techniques have developed and become more sophisticated over time. For example if writing about the uses of rotoscoping for the different purposes of narrative 2D animation for TV, film and music videos, they may critically compare the use of traditional rotoscoping in Max Fleischer's *Superman* cartoons (1940) with the use in Ralph Bakshi's *Lord of the Rings* (1978) and the use of digital rotoscoping in *A Scanner Darkly* (2006) along with the music video for A-ha's *Take on Me* (1985).

Learners will discuss the characteristics of the different techniques, i.e. the methods by which they are produced and the visual characteristics by which they can be identified. Their evaluation of these examples will refer to the suitability for purpose in respect of aesthetic and audience considerations, and will also evaluate technical considerations, for example learners may comment that a television animation from the 1960s shown on modern HD televisions may look inferior in quality due to being produced in lower resolution, and may be stretched or cropped when viewed in widescreen. They will produce evidence in a form that will allow them to compare the different purposes and techniques by means of the use of examples, but this evidence could be presented in a variety of ways, such as a report, presentation, blog or even a voice recording over a video sequence of examples used.

For merit standard, learners will select different techniques and analyse examples of their application to different purposes. Although the selection of purposes may relate to a specific media sector, learners will demonstrate an awareness of the use of digital 2D animation within different media sectors. They will compare the different techniques by means of the use of detailed and specific examples of both traditional and digital 2D animation, analysing how they are each applied to different purposes. Learners will refer to aesthetic, audience and technical considerations in their analysis, but not necessarily in every example and there may be little or no evidence of qualitative judgements being made as to the effectiveness of the examples in fulfilling their purposes.

For pass standard, learners will explain how specific types of media product use 2D animations to serve a purpose, and how digital 2D animation is used in different sectors, but might not give specific examples to illustrate this. Their explanations will give the development of the chosen 2D digital animation techniques and their characteristics, i.e. how the techniques operate and the elements by which they are recognisable. They will include an examination of their technical characteristics for specific purposes, for example learners may observe that, 'Animations for web banners are often constructed from vector shapes in flat colours as animated gifs and may be animated at only 15 fps so that the file size will be small and not take long to load if the broadband is slow.' They will make some basic comparisons between the characteristics of the techniques chosen.

Learning aim B

For distinction standard, learners will produce sample digital 2D animation tests in different styles to inform concept ideas for animations. They will demonstrate an individual, creative approach and may have combined techniques in interesting or unusual ways. Their work will show a high level of technical skill and final animations will be free from obvious technical flaws. Their selection of tools and techniques will be justified, possibly by means of annotation or a blog, in the presentation of the ideas or as a voice-over on a showreel of the ideas produced.

For merit standard, learners will use tools fluently and explore different techniques effectively to clearly inform ideas, but the different techniques used may be limited in breadth or not combined to creative effect. Their selection of tools and techniques will be appropriate and explained by learners, but there will be little evidence of justification of the processes selected.

For pass standard, learners will use digital 2D animation tools and techniques to present ideas. Their range of experimentation and their documentation of the process of using these tools and techniques to inform ideas will be limited with explanations not always clear.

Learning aim C

For distinction standard, learners will evidence detailed planning, which will include an analysis of the brief, scheduling and a clear development of the idea or visual narrative from ideas stage to competed animatics or trial animations, along with other necessary documentation. Learners' production of the finished digital 2D animation will be documented, which may be by means of a production log.

Learners will demonstrate a degree of sophistication and precision in the use of tools and techniques and, where appropriate, will have added scripts. For example an animation for a web page may include interactive narrative elements to give the viewer choice and enhance the user experience. Learners' final product will be complete, fulfil its purpose and be free from obvious flaws. Learners will export it in an appropriate format for its intended platform, for example for TV or a social media platform. Their creative and technical choices will be justified, comparison will be made to historic and contemporary influences, legal and ethical issues fully considered and an evaluation will be made of fitness for purpose, with reference to the original constraints of the brief and as a result of feedback on the finished product from the client or target audience.

Learners will demonstrate a professional approach to their work, including high attendance to classes and workshops, good timekeeping and meeting all interim and final deadlines.

For merit standard, learners will include an analysis of the brief, scheduling and their development of the idea or visual narrative from ideas stage to completed animatics or trial animations in their planning documentation. Learners will provide some degree of specific detail in planning and documenting the different stages of the production of the finished digital 2D animation, which may be by means of a production log.

Learners will demonstrate effective use of tools and techniques. Where appropriate, they may add simple scripts, for example an animation for a web page may include a clickable element to take viewers to the next scene. Their final product need not be lengthy but will be complete and suitable for purpose. Learners will export it in an appropriate format for its intended platform, for example for TV or a social media platform.

Learners will evaluate their creative choices and the influences on these decisions and the appropriateness of tools and techniques used. While there may be minor flaws in the finished product, these will not be immediately obvious.

For the pass standard, learners will follow appropriate processes to plan and produce the finished animation and document their creative choices, but they may not evidence consideration of all necessary elements of these processes.

Learners' use of tools and techniques will not always be fully appropriate and, although the realisation of the idea will be obvious in the animation, the finished product will not be complete in itself in fulfilling the intended purpose, for example a narrative originally intended to be complete may end suddenly with a 'to be continued' screen due to learners having planned time or resources ineffectively. Their finished product will be exported and working, though not necessarily in the most appropriate format for purpose and it may contain minor, but obvious, flaws.

Links to other units

This unit links to:
- Unit 29: 2D Digital Graphics
- Unit 30: Page Layout and Design for Digital Media
- Unit 43: 3D Digital Animation.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities to do so.

This unit would benefit from employer involvement in the form of:
- guest speakers and interview opportunities
- opportunities to visit suitable exhibitions.

Unit 34:   Game Engine Scripting

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners understand core concepts in scripting languages, artificial intelligence (AI) and physics. Learners plan the scripting of a digital game before creating it in a game engine.

Unit introduction

Scripting is fundamental to any game. The vision of the game design has to be implemented before anybody can actually play the game itself, and the skill of the programmer dictates how far that vision becomes a reality.

You will learn about the key concepts in artificial intelligence and the scripting and programming languages used to build up the complex interactivity that games rely on. Because so many games take advantage of physics, often using a dedicated physics engine, you will also learn about key concepts in physics for games. You will plan the gameplay and scripting of a game and you will go on to make that game in a game engine.

This unit will give you a foundation in games engine scripting. You can use the work that you produce as a basis for further scripting and programming study in higher education, or as a stepping stone towards setting up as an independent games developer.

Learning aims

In this unit you will:

A Understand core concepts in game engine scripting

B Prepare the scripting for a digital game

C Script a digital game in a game engine.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand core concepts in game engine scripting	**A1** Core concepts in scripting languages and artificial intelligence **A2** Core concepts in physics for digital games	Spoken or written report.
B Prepare the scripting for a digital game	**B1** Prepare gameplay **B2** Prepare scripting	Gameplay plan. Scripting plan.
C Script a digital game in a game engine	**C1** Script the digital game	Final version of the digital game in the authoring game engine. Spoken or written commentary on own scripting.

Content

Learning aim A: Understand core concepts in game engine scripting

A1 Core concepts in scripting languages and artificial intelligence

- Objects, classes and instances.
- Inheritance – parent-child relationships.
- Events.
- Data types and structures:
  - integer
  - floating point
  - boolean
  - string
  - array
  - list.
- Constants.
- Local and global variables.
- Syntax – semi-colons and curly braces.
- Declaration, initialisation and assignment.
- Arithmetical operators.
- Logical operators:
  - AND
  - OR
  - NOT.
- Conditional/selection statements:
  - if, else and elseif
  - switch and case.
- Loop/iteration statements:
  - do and until
  - for
  - repeat
  - while.
- Jump statements:
  - break
  - continue
  - goto.
- Subroutines – procedures/functions/methods:
  - construction
  - calling
  - arguments and parameters.
- Configuration files – INI.
- Artificial intelligence concepts:
  - finite state machine
  - fuzzy logic
  - pathfinding and navigation.

A2 Core concepts in physics for digital games

- Physics engines.
- Collision detection and resolution.
- Rigid body dynamics/physics.
- Soft body dynamics/physics.
- Particle simulation.
- Mass.
- Speed, velocity and acceleration.
- Density.
- Friction.
- Restitution/elasticity.
- Angular and linear damping.
- Force.
- Resolution of forces.
- Impulse.
- Momentum.

Learning aim B: Prepare the scripting for a digital game

B1 Prepare gameplay

- Available game engine(s) – 2D or 3D.
- Available assets – graphics.
- Pre-existing engine features.
- Platform – mobile.
- Audience:
  - gamer type – hardcore, mid-core, casual
  - demographic.
- Genre.
- Purpose, e.g. to entertain.
- Objectives.
- Challenges.
- Victory condition(s).
- Player input/controls.
- AI features.
- User interface.

B2 Prepare scripting

- Base and derived components – parent and child objects.
- Variables.
- Data structures.
- Events.
- Subroutines.
- Display.

Learning aim C: Script a digital game in a game engine

C1 Script the digital game

- Appropriate code editor:
  - inbuilt
  - external
  - text
  - visual.
- Import assets.
- Code layout.

- Commenting.
- Initial setup – creation of objects and initialising variables.
- Iterative development of gameplay:
  - conditional/selection statements
  - loop/iteration statements
  - jump statements
  - subroutines
  - arithmetical and logical operators
  - artificial intelligence behaviours.
- Adaptation of plans:
  - reasons for departure from planning.
- Debugging:
  - functionality testing
  - debug messages.
- Script compilation.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand core concepts in game engine scripting		
A.P1 Explain core concepts in scripting languages and artificial intelligence. **A.P2** Explain core concepts in physics for game engine scripting.	**A.M1** Analyse examples of scripting languages, artificial intelligence and physics in games.	**A.D1** Evaluate examples of scripting languages, artificial intelligence and physics in games.
Learning aim B: Prepare the scripting for a digital game		
B.P3 Create a gameplay plan appropriate for platform, audience and purpose. **B.P4** Create a scripting plan for designed gameplay appropriate for audience and purpose.	**B.M2** Create detailed planning for the scripting of a digital game that is effective in terms of platform, audience and purpose.	**B.D2** Create comprehensive planning for the scripting of a digital game.
Learning aim C: Script a digital game in a game engine		**C.D3** Create imaginative scripting for a digital game that closely matches the original plan.
C.P5 Create appropriate functional scripting for a digital game that recognisably reflects the original plan.	**C.M3** Create effective scripting for a digital game that matches the original plan.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.P4, B.M2, B.D2)

Learning aim: C (C.P5, C.M3, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- a game engine capable of implementing the unit content
- an appropriate code editor (if not available in the engine)
- appropriate library assets (graphics etc).

Essential information for assessment decisions

Learning aim A

Learners will discuss a lot of technical content. For scripting languages, that discussion will be affected to some extent by the language students are learning to use, but they will show they understand the range of content even if some of it does not apply to their target language. For physics, students will demonstrate their understanding of concepts to a level where they could use them in a game engine, but they are not expected to calculate quantities in specific circumstances or explain underlying theory.

For distinction standard, learners will assimilate the content and have an overview that enables clear evaluation of particular examples and their effects rather than merely how they work. In terms of scripting languages, they might explain how a particular loop works, discuss alternative ways the same things could have been scripted and evaluate which is most effective. In terms of physics, evaluation is more likely to focus on whether the physical settings in a particular example have been well chosen in terms of realism and/or gameplay. For example, distinction learners might explain that the mass of a ball in a snooker game has been well chosen for the apparent force of the cue, but that the friction and restitution are unconvincing.

For merit standard, learners will analyse the working of at least half of each part of the content through specific examples. In terms of scripting languages, merit learners might analyse how a loop is used in a specific example to draw the results of a high score array, putting a specific space between each line. In terms of physics, the same learners might analyse how the restitution varies in a pinball game depending on which parts of the table the ball hits. Learners' work may have occasional gaps in content or occasional errors, but these will be rare.

For pass standard, learners will successfully explain the different elements of scripting languages and physics in games development. They will either not use specific examples or the examples will be perfunctory and not analysed to show how they work. Their explanations will have some substance and will be more than brief, generic descriptions that could be lifted from any website. In terms of scripting languages, learners might explain that a switch statement allows a script to have a range of different outcomes depending on different conditions, known as cases. In terms of physics, the same learners might describe that friction is what slows an object down if it slides over another object or makes it difficult to push. Learners' work will cover at least three quarters of each part of the content and will be substantially accurate.

Learning aim B

For distinction standard, learners will plan comprehensively for both gameplay and scripting. For gameplay, learners will thoroughly consider all the unit content to arrive at a plan that completely describes the planned game. For scripting, the implementation of this game will be thoroughly planned and will allow for the same wide range of techniques that is required for distinction for learning aim C.

For merit standard, learners will plan in detail for both gameplay and scripting. For gameplay, learners will consider the vast majority of the unit content to arrive at a plan that describes the planned game in detail, although there may be a few uncertainties or gaps. For scripting, learners will plan the implementation of this game in detail and will allow for the same range of techniques that is required for merit for learning aim C, but, once again, there will be a few uncertainties or gaps.

For pass standard, learners will plan appropriately for both gameplay and scripting. For gameplay, learners will consider over half the unit content to arrive at a plan that describes their intended game in enough detail that it is clear what they intend to make. For scripting, the implementation of this game will be planned in enough detail that it is clear learners have an idea of what they need to do, but there will be gaps and work is likely to be superficial. Plans for entirely trivial games with very limited scripting, such as simply tapping or clicking on a moving object should not be considered substantial enough to pass.

Learning aim C

Learners will script a digital game in a game engine. They will be assessed on their scripting, not on how well designed the gameplay is or how good it looks, except where this is directly controlled by the scripting. Learners might choose a library sprite for a 2D game that is not very appropriate for their game. This would not affect the assessment, but how the animation speed and rotation of the sprite was controlled through their scripting would.

Learners will make the game they planned to make. They may adapt their plans, but must explain any such adaptation in accompanying documentation, either written or spoken. Significant changes will affect the grade, as set out below. It is best practice for learners to make the working of their scripting clear by including appropriate comments.

For distinction standard, learners will create imaginative scripting for a digital game that closely matches their original plan. They may not be able to implement everything that was planned, especially if their planning was overambitious, but most or all of the features in the game will be intended, closely delivering the original vision of the game. Learners will explain the reasons for any changes. They will provide imaginative scripting, i.e. doing things in creative, non-straightforward ways where development includes the creation of complex actions in games, such as a finite state machine with several different states depending on the condition of both the player and non-player characters. Learners will define and call their own subroutines.

For merit standard, learners will create effective scripting for a digital game that matches their original plan, with few adaptations, and the game will mostly be what was intended. Learners will explain the reasons for any changes. They will provide effective scripting, i.e. the game will work efficiently – doing what it was designed to do, with few bugs or errors – but with quite straightforward scripting and containing little complex or imaginative work. Their scripting will make effective use of statements, so a game that does little more than assign values to functions built into the game engine must not be considered substantial enough for a merit.

For pass standard, learners will create appropriate, functional scripting for a digital game, i.e. their scripting will deliver an experience that is clearly a game controlled by a player with objectives and challenges, with the game working and playable. The game may have bugs and may depart substantially from the original plan, but it will be functional and recognisably what was planned. Entirely trivial games with very limited scripting, such as moving an object across an empty 2D space to a goal, will not be considered substantial enough to pass.

Links to other units

This unit links to:
- Unit 13: Digital Games Production
- Unit 42: Games Testing
- Unit 32: Concept Art for Computer Games.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities to do so.

This unit would benefit from employer involvement in the form of:
- guest speakers
- opportunities to visit suitable exhibitions.

Unit 35:   Multi Camera Techniques

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

This unit focuses on techniques for multi camera production. The unit explores filming in a studio, outside broadcast and event production that requires the use of multiple cameras.

Unit introduction

The television (TV) industry is increasingly using multi camera production as a quick and efficient way to produce generic content to fill schedules. Multi camera production is therefore a crucial discipline in TV and video output today. Live sports coverage, studio panel shows, soap operas, live music performances and news broadcasting all rely on multi camera techniques to bring the content to the screen.

In this unit, you will investigate different types of multi camera production and how the format is used to efficiently and quickly record footage of live events. You will also investigate the different roles and people that make up the crew for a multi camera production and the inter-relationships between them. You will prepare for a multi camera production, creating running orders, scripts, pre-recorded video tape (VT) items, timings and cues, floor plans and camera scripts, to ensure the smooth running of a production. You will take on a key role in the making of a finished multi camera production, for a recognisable genre aimed at a specific audience.

This unit will give you the multi camera production skills in TV and video output to progress to employment, or further develop these skills at higher education establishments.

Learning aims

In this unit you will:

A Understand different types of multi camera production and the role of the crew

B Prepare material for a multi camera programme in a recognisable genre and format

C Carry out a key role in the production of a multi camera programme in a recognisable genre and format.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand different types of multi camera production and the role of the crew	**A1** Purposes and formats of multi camera productions, conventional approaches to live recording **A2** Roles and responsibilities involved in multi camera production	Analysis of a range of media texts and their use of multi camera production in different formats. Research folder explaining the individual roles and responsibilities involved in multi camera production.
B Prepare material for a multi camera programme in a recognisable genre and format	**B1** Creating material for multi camera production **B2** Logistical planning for studio- or location-based multi camera production	Production folder for the planning of a multi camera production. Pre-production folder, including logistical and practical considerations.
C Carry out a key role in the production of a multi camera programme in a recognisable genre and format	**C1** Management of the production process and periodic review **C2** Production tasks and self-evaluation	Practical multi camera production project encompassing management and review of production. Observation of learners carrying out a given production task towards a multi camera production.

Content

Learning aim A: Understand different types of multi camera production and the role of the crew

A1 Purposes and formats of multi camera productions, conventional approaches to live recording

The purpose, function and format of multi camera use in productions for different genres.

- The role of narrative formats:
  - o soap opera use of studio locations, typical camera setups, efficiency of production
  - o situation comedies mix of studio based, location filming, studio audiences
  - o recording of live drama productions.
- The role of non-narrative formats for different genres:
  - o studio based panel shows, games shows, chat shows, studio layouts, setups and formats
  - o live music recording, camera positions, use of audio
  - o live events, logistics, positioning and running orders
  - o news broadcasting, timings and VT inserts.

A2 Roles and responsibilities involved in multi camera production

Multi camera production requires a range of personnel working as part of a team/crew, each undertaking specific well-defined tasks. These can broadly be split into those within the studio or within the filming location and those in the gallery or outside broadcast (OB) truck or control room.

- Studio floor roles and activities:
  - o camera operator, using camera scripts, taking directions, offering shots working with grips and cable-basher
  - o floor manager, liaising between the gallery and studio floor, organising personnel, cueing presenters
  - o boom operator, providing audio coverage, ensuring audio balance, capturing studio atmosphere
  - o presenters, developing scripts, rehearsing, interviewing, reading autocue.
- Gallery or control room roles and activities:
  - o director, giving direction to camera operators, ensuring consistency of camera and timings
  - o vision mixer, communicating live shots to camera operators, choosing shots, titles or VT content through instructions from director
  - o production assistant, counting down timings, measuring running times, confirming running orders
  - o sound mixer, ensuring all audio levels are balanced, playing in music, sound effects and stings
  - o VT operator, cueing inserts, titles and stings. Ensuring playback is in sync with running orders.

Learning aim B: Prepare material for a multi camera programme in a recognisable genre and format

B1 Creating material for multi camera production

Material and/or content for multi camera production.

- Tools for a multi camera production:
  - o VT inserts
  - o video packages
  - o audio.

- Creating content for a multi camera production:
  - scripts/running orders
  - camera scripts
  - house style
  - animations/titles/stings
  - purpose and consistency
  - balance of content
  - mode of address, style
  - timings
  - autocue entry.

B2 Logistical planning for studio- or location- based multi camera production

Multi camera productions are very complicated logistically and also relatively expensive to run. They need detailed and careful planning to ensure that all of the different elements and contributions come together to enable production to run to time and budget.

Logistical considerations:

- production paperwork
- floor plans, studio layouts
- timings, cue lists
- equipment lists
- crew lists
- location visits and risk assessments.

Learning aim C: Carry out a role in the production of a multi camera programme in a recognisable genre and format

C1 Management of the production process and periodic review

- Production management:
  - production meetings
  - rehearsal, refinements and adaptations
  - contingency plans.
- Own role in relation to other crew/team roles in a multi camera production.
- Action planning activity.
- Monitoring progress against original intentions.

C2 Production tasks and self-evaluation

- Production and activity logging:
  - live recording on location or studio
  - assignment of team roles
  - production diary describing production activities and team roles, including own response to direction.
- Self-evaluation of final product:
  - fitness for purpose of final product outcome
  - audience response
  - comparison with similar products
  - own role in contributing to the product outcome
  - peer review
  - own strengths, weaknesses and plan for skills and knowledge development.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand different types of multi camera production and the role of the crew		
A.P1 Explain how multi cameras are used in producing non-narrative and narrative multi camera programmes using relevant terminology. **A.P2** Explain how the roles and responsibilities of a multi camera production team interact.	**A.M1** Analyse effectively how different types of multi camera programmes are used, employing correct terminology. **A.M2** Explain in detail how the roles and responsibilities of a multi camera production team interact effectively.	**A.D1** Evaluate the roles of team members employed in the different multi camera production teams using examples of multi camera production use.
Learning aim B: Prepare material for a multi camera programme in a recognisable genre and format		**B.D2** Prepare comprehensive planning documentation for use in managing a multi camera programme in a recognisable format.
B.P3 Develop production material for a multi camera programme in a recognisable format. **B.P4** Present planning documentation for use in managing a multi camera programme.	**B.M3** Develop appropriate production material for a multi camera programme in a recognisable format. **B.M4** Prepare detailed planning documentation for use in managing a multi camera programme.	
Learning aim C: Carry out a key role in the production of a multi camera programme in a recognisable genre and format		**C.D3** Demonstrate a comprehensive contribution to the success of a multi camera production in a recognisable format.
C.P5 Work competently in a key role to produce a multi camera production in a recognisable format.	**C.M5** Work effectively in a key role to produce a fit-for-purpose multi camera programme in a recognisable format.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.M2, A.D1)

Learning aim: B (B.P3, B.P4, B.M3, B.M4, B.D2)

Learning aim: C (C.P5, C.M5, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners will need access to a studio or live multi camera recording equipment, including:

- three or more cameras
- talkback system
- vision mixer
- recording devices
- playback (VT/online)
- titling facilities
- sound desk
- microphone
- monitors
- cabling
- lighting
- existing multi camera examples
- open source or proprietary editing and post-production software.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will evaluate the purpose and function of multi camera production across both narrative and non-narrative formats and the role of the teams involved. There will be discussion on the way that the multi camera production is constrained or limited by the studio or location in which it is filmed and also the advantages of producing content in this way. For example, learners may indicate that soap operas use multiple cameras, recording simultaneously in a recognisable location (such as the Queen Victoria Pub in *EastEnders*), because it allows producers to quickly rehearse and record scenes in a tight production schedule (requiring up to 90 minutes of content per week, as opposed to a six-week filming schedule for a two hour single-camera feature film). This restricts the director in using formulaic shot types (wide shot to establish the relative locations of the characters, over-the-shoulder mid shots moving to close-ups as the scene becomes more intense).

Learners will show a clear and detailed understanding of the workings of a studio floor and gallery indicating, for example, that the production assistant keeps counting down timings to ensure the production runs to the planned time, and that the vision mixer announces to the camera operator when their camera is the live shot, with the director able to overrule and 'run' the production through instructions to all.

For merit standard, learners will make comparisons between the different types and formats of multi camera productions in both narrative and non-narrative forms. The work will be interlinked, for example, learners may write, 'A live news broadcast has to adhere to strict timings as it cannot be edited following recording, whereas a panel quiz show is likely to be filmed in front of a live audience but will be edited down to broadcast time after recording, leading to the requirement of 'pick up' shots and lines from the presenter.'

Learners at this standard will be able to discuss the interrelationships between roles in the production team. They may note for example, 'The camera operators do not speak through the talkback system during recording, as this would be picked up on the studio microphones. They have to take direction from the director, without questioning the decisions.'

For pass standard, learners will produce two reviews. One will be of a multi camera narrative production and the other, a non-narrative programme; there will not be significant cohesion in linking the content and format, with the ways the programmes are produced. Learners may write simplistically about codes and conventions, for example, 'Sitcom dialogue scenes tend to be filmed from three angles, one for each of the speakers and a two-shot.'

Learners will give an explanation of the main production roles and their jobs but these will mainly be descriptive, and not discuss interrelationships and the differences when the production moves from studio to location.

Learning aim B

For distinction standard, learners will demonstrate a professional and organised approach when working with others. Learners will demonstrate their understanding through the management of the logistics, organising their area of responsibility in a multi camera production, which may include booking the room and correct equipment, doing checks and managing their relationship with the talent and crew, to achieve the correct result. Their production folder and development work for this section of the unit will be organised, well-presented and approach the standards expected by professional production managers.

For merit standard, learners will produce high-quality materials for their production. This may take the form of a video package of vox pops style interviews on a topical subject filmed in the local community, and edited to insert into a magazine style multi camera production. Learners may write presenter scripts, or devise title stings to break up the show or identify regular features.

The production learner's folder will be comprehensive, including detailed plans for production that they have developed for a multi camera programme in a recognisable genre or format.

For pass standard, learners will produce material towards a multi camera programme. The material produced for the multi camera programme must be produced for this purpose. The material may have occasional lapses in quality but will be made with the purpose of supporting a multi camera production. Written material may have omissions, such as timings missed off a script or be inappropriate, for example, a running order with large gaps left unfilled for 'improvisation'.

Learners at this standard will have omissions in their production folders, for example, studio floor plans lacking in detail, and there will only be superficial links between the original idea and the logistical planning.

Learning aim C

For distinction standard, learners will use work creatively, in a given role and have a significant impact on the style and effectiveness of a multi camera production. They could, for example, act as a camera operator and provide a stable but handheld shooting style for presenter pieces to cameras that give the show a sense of energy and informality. Their work towards the show will be high quality, with only very occasional lapses or mistakes. It is important that assessors differentiate between the quality of the final product and learners' individual contribution towards it. Observation records may be an important part of the evidence in a number of cases.

The finished product will include titles and credits and will conform to the conventions of the identified genre or format, and also be fit for purpose.

Learners' evaluations will be based on carefully sourced feedback from a range of viewers (internet views, presentation to peers, teachers) and analysed through careful comparison with similar well-chosen examples.

For merit standard, learners will use work effectively in a given role and make a high-quality contribution to a multi camera production. They could, for example, act as a camera operator and provide well-framed, correctly exposed and focussed shots throughout the show, taking directions from the director in the gallery. There may be occasional lapses or mistakes but overall their contribution will not disrupt or adversely affect the show. It is important that assessors differentiate between the quality of the final product and learners' individual contribution towards it. Observation records may be an important part of the evidence in a number of cases.

The evaluation will draw on the views of others and go into detail about how the product has met or attempted to meet its original intentions, giving examples of how the techniques used led to the end result and comparing this with professional practice.

For pass standard, learners will use work in a significant role and make a contribution to a multi camera production. They could, for example, act as a camera operator and provide coverage of angle shots throughout the show, although they may not always respond decisively to direction and some footage may be poorly framed, lose focus or be inconsistently exposed. It is important that assessors differentiate between the quality of the final product and learners' individual contribution towards it. Observation records may be an important part of the evidence in a number of cases.

The evaluation will be largely descriptive but discuss the fitness for purpose of the piece and may not be wholly accurate in the judgements made. The review will draw upon the opinions of others, but the results of this feedback will generally not lead to insight into the quality of the final product.

Links to other units

This unit links to:
- Unit 4: Pre Production Portfolio
- Unit 21: Film Editing
- Unit 36: Lighting Techniques.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:
- guest speakers
- opportunities to visit suitable exhibitons.

Unit 36:   Lighting Techniques

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

This unit will focus on the use of lighting in creative digital media production and the way it can have a dramatic impact on the audience of a product.

Unit introduction

There have been huge steps in the fields of colour correction and post-production to enhance the look of footage after it has been captured but the role of lighting for moving image and photography remains extremely important for professional producers.

In this unit, you will investigate the use of lighting and its purpose in a range of media products. The lighting used in a popular music video is likely to be very different to the lighting used for the studio of a TV news programme but both are important elements of the production design of each media product. The ability to understand how lighting helps create meaning in a media product, or how it is used in a purely practical sense to light important aspects of the programme, will lead to you designing lighting setups for given purposes.

It is important that you understand commonly used setups and the components of a lighting design for a media product. You should be able to practise on equipment and learn how to safely set up lighting kits, experimenting with different colours and effects. The skills you explore in this unit can be broadened and expanded by seeking a role in the industry or can be developed by progressing to higher education.

Learning aims

In this unit you will:

A Understand how lighting creates meaning in media production

B Investigate the technology and lighting techniques used in the industry

C Set up lighting equipment safely for a range of purposes.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand how lighting creates meaning in media production	**A1** The use of lighting techniques to create meaning in media products **A2** The relationship between lighting and genre	A report (or recorded voice over edited clips), analysing a range of media texts and their use of lighting. A presentation identifying different uses of lighting.
B Investigate the technology and lighting techniques used in the industry	**B1** Different types of lighting equipment and their purposes **B2** Examine commonly used lighting setups	A workbook recording different procedures for the setup of lighting equipment. Practical work and observation records of learners' workshop practice. A log of skills development. Test images/test footage of different lighting setups.
C Set up lighting equipment safely for a range of purposes	**C1** Requirements of different media products **C2** Planning lighting scenes, selecting and deploying equipment **C3** The safe use of lighting equipment	A practical project encompassing lighting setups for three distinct media products. Working documentation to include risk assessments and planning documentation.

Content

Learning aim A: Understand how lighting creates meaning in media production

A1 The use of lighting techniques to create meaning in media products

Lighting is used in a variety of ways and for a variety of purposes in media products.

- Functional purposes of lighting:
  - lighting people to provide flattering images – lighting interviewees for non-fiction broadcast products, soft lighting to give less shadow, high-key lighting to provide even illumination of subject
  - lighting to illustrate elements of a background to provide information to the audience
  - practicals – onscreen sources of light from within the world of the product
  - provide contrast from other setups – in music videos
  - highlight products – in advertisements.
- Artistic purposes:
  - low-key lighting, use of shadow, the 'Rembrandt' effect, modelling of light, uplighting, spotlighting
  - lighting to establish a setting, time of day
  - lighting to reflect natural conditions – moonlight, daylight through a window, fire etc.

A2 The relationship between lighting and genre

Many genres of media product have typical lighting setups that have become synonymous with the type of production.

- Film noir:
  - low-key lighting
  - use of shadows to frame subjects
  - shadows from blinds to obscure faces
  - chiaroscuro lighting.
- Horror:
  - use of shadow
  - atmospheric effects
  - obscuring of detail to provoke imagination.
- Music video:
  - performance-based spotlighting
  - strobing
  - lighting to convey mood
  - lighting to create contrast.

Learning aim B: Investigate the technology and lighting techniques used in the industry

B1 Different types of lighting equipment and their purposes

There are a number of commonly used devices involved in lighting moving image products in the industry.

- Portable lighting equipment:
  - redheads
  - blondes
  - practicals
  - reflector boards
  - scrim/diffuser
  - gels.

- Studio lighting:
  - spotlighting
  - floods
  - gobos.
- Quality and positioning:
  - hard and soft light
  - key, fill and back lighting
  - directional lighting
  - temperature – daylight 5600 °K, tungsten 3200 °K.

B2 Examine commonly used lighting setups

There are a number of commonly used lighting setups used in professional productions.

Lighting setups:

- three-point lighting
- four-point lighting
- stage lights
- lighting for portraiture
- lighting for factual programming.

Learning aim C: Set up lighting equipment safely for a range of purposes

C1 Requirements of different media products

Each media product has specific requirements of lighting technicians.

- Genre:
  - music video
  - noir
  - horror
  - factual
  - news.
- Brand identity:
  - TV advert
  - corporate video
  - highlighting product.

C2 Planning lighting scenes, selecting and deploying equipment

- Lighting on location:
  - location recce, power points, positioning
  - cabling
  - risk assessment
  - booking equipment
  - lighting plans.
- Studio lighting:
  - lighting control
  - use of dimmer racks
  - focusing and positioning.

C3 The safe use of lighting equipment

- Defining hazards:
    - hazards to crew
    - temperature of equipment
    - distance from subject
    - risk of fire
    - risk of electric shock
    - trailing cables.
- Correct procedure for lighting setup:
    - sequence of operations
    - checking of equipment
    - conducting risk assessments.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Understand how lighting creates meaning in media production		**A.D1**	Evaluate the relationship between lighting and genre in creating meaning across a range of media products, using well-chosen examples.
A.P1 Explain how lighting is used to create meaning in media products. **A.P2** Explain the relationship between lighting and genre.	**A.M1** Analyse the relationship between lighting and genre in creating meaning across a range of media products.		
Learning aim B: Investigate the technology and lighting techniques used in the industry		**B.D2**	Explore lighting equipment and setups creatively and confidently for different purposes.
B.P3 Explore the equipment used in creating lighting for media products. **B.P4** Explore lighting setup for different purposes.	**B.M2** Explore equipment and lighting setup effectively for different purposes.		
Learning aim C: Set up lighting equipment safely for a range of purposes		**C.D3**	Plan and set up effective and creative lighting for a range of different media products.
C.P5 Plan the requirements of a lighting setup for a particular scene in a media product. **C.P6** Set up lighting equipment competently for a given purpose.	**C.M3** Plan and set up lighting equipment effectively for a given purpose.		

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.P4, B.M2, B.D2)

Learning aim: C (C.P5, C.P6, C.M3, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- portable lighting kits comprising three portable lanterns (such as redheads), stands, power extension cables and diffuser materials
- a selection of gels and filters to enable learners to experiment with colouring
- camcorders or film cameras with manual exposure and white balance functions to record the lighting work accurately.

Essential information for assessment decisions

This unit is assessed internally by the centre and externally verified by Pearson.

Learning aim A

For distinction standard, learners will analyse the way that lighting has been used in a range of media products and across different genres, demonstrating an understanding of the intentions of the filmmaker and the effect that lighting has on the audience. Their evaluation will be supported by well-chosen examples from a range of media texts. They may say, for example, 'In Oliver Stone's *Natural Born Killers*, Mallory's seduction of a gas station attendant is lit with hyper realistic green lighting that is similar to what might be used in a music video. This makes the scene seem glamorous and might make the audience feel more comfortable with what is happening (almost seduced themselves) in contrast to the following scene, lit with very harsh, bright natural sunlight and almost overexposed, where we find out what has happened to the attendant. This scene, the following day, feels very realistic and is lit as if it were part of a documentary.'

For merit standard, learners will coherently analyse examples of the relationship between lighting and genre in a range of media texts. Their description will be accurate yet there will not always be a clear comparison between the way lighting is used across different genres and formats. They may say, for example, 'In Oliver Stone's *Natural Born Killers*, there is a scene in a gas station that is lit as if it is in a music video. The next scene is very brightly lit, with no shadows, and feels like a documentary.'

For pass standard, learners will clearly describe how lighting is used across a range of media products. Their work will mainly be descriptive and will not necessarily compare and contrast the lighting in different genres or formats. They may say, for example, 'In Oliver Stone's *Natural Born Killers,* there is a scene in a gas station that is shot in green lighting. The next scene is shot with bright natural lighting with little shadow.'

Learning aim B

For distinction standard, learners will creatively and confidently use a range of lighting equipment and setups. They will demonstrate their ability to select and use particular setups that are best suited for the different purposes and the different effects that can be produced in a range of situations. Learners will be able to support this by saying, for example, 'The commonly used three-point lighting setup works well in interview situations for documentary and current affairs programmes. The back light is used to give depth to the subject. When we experimented with switching this lamp off, the person appeared to be flat against the background, making the programme less realistic for the audience. Audiences are used to seeing well-lit subjects in these situations so a poorly-lit interview would be distracting to the viewer.'

For merit standard, learners will produce evidence that shows their understanding of the uses of different setups and the differences between types of equipment used for different purposes. They may say, for example, 'The fill light in the three-point lighting setup stops harsh shadows on the subject. We managed to replicate this effect without a lantern by using a reflector board held close to the subject's face but out of the camera shot, angling the light back from the key light.'

For pass standard, learners will use lighting equipment and setups ably, showing their understanding of the uses of some basic lighting setups, components and techniques and how they differ according to purpose. They may back up their choice by saying, for example, 'We used 'scrim' or diffuser over the fill light so that the light was softer and not so harsh on the subject's face. It produced a good effect.'

Learning aim C

For distinction standard, learners will provide evidence of extensive experimentation into lighting, having set up lights for a range of purposes and recorded what was successful and how this effect was achieved. Their record or log of understanding will be accompanied by footage (or images) that shows their working, as well as an evaluation of whether their approaches were successful. Learners will clearly plan to light scenes for particular purposes and provide evidence of successfully creating the intended effect for a range of purposes. They will support this with risk assessments and procedure lists to enable their safe use of equipment.

For merit standard, learners will set up lights for a range of purposes and effects, recording evidence of their achievement. Their record or log of understanding will be accompanied by footage (or images) that shows their working as well as their discussion on whether their setups are fit for purpose. Learners' decisions may not always be accurate, for example they may set up lighting that is not necessarily appropriate for a particular purpose, although they will usually make the right decision. They will support their planning with risk assessments and procedure lists to enable their safe use of equipment.

For pass standard, learners will plan to light a particular scene, providing lists of equipment and positions of lights. Their understanding of the desired effect to be produced by these plans may not always be accurate. They will provide risk assessments that demonstrate their safe use of lighting equipment. Learners will put their plan into action by setting up lighting equipment for a particular purpose. They will ensure that the appropriate equipment will be selected for the given genre/purpose and that all safety measure will be carried out correctly when setting up the lighting.

Links to other units

This unit links to:
- Unit 20: Single Camera Techniques
- Unit 23: Stop Motion Animation
- Unit 35: Multi Camera Techniques.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:
- guest speakers
- opportunities to visit suitable exhibitons.

Unit 40:   3D Modelling

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners understand how 3D models for games are structured, used and produced before planning and creating 3D models for use in a 3D game engine.

Unit introduction

3D models are at the centre of most 3D games: the buildings and streets in a world, the objects in or on them, and even the sky, are all 3D models. 3D artists spend their time constructing these objects and this unit allows you to understand what they are and how to make them.

You will learn how 3D models are structured, what they are used for and the different elements in them. You will plan ideas for your own models, and create and texture them before setting them up so that they can function properly in a 3D game engine. You will import your models into the engine and check them to make sure they function effectively in-game.

This unit will give you some of the key skills needed to be a 3D game artist. The work you produce can form part of your portfolio for progression to employment or higher education.

Learning aims

In this unit you will:

A Understand the structure and use of models for 3D games

B Explore ideas for the production of 3D models

C Develop 3D models for use in a 3D game engine.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand the structure and use of models for 3D games	**A1** Structure of 3D models **A2** Uses of 3D models	A report or presentation. Outlining the structure and uses of 3D models.
B Explore ideas for the production of 3D models	**B1** Generate and develop ideas	A design log or specification covering the development of ideas from original concept to final scale drawings, with comments on all visual material.
C Develop 3D models for use in a 3D game engine	**C1** Create 3D models **C2** Set up 3D models in a 3D game engine	Final files of the models in the 3D package, export files, level file from the 3D engine containing the set-up models. A spoken or written file documenting the work done.

Content

Learning aim A : Understand the structure and use of models for 3D games

A1 Structure of 3D models

- 3D coordinate systems – world, local, Z-up and Y-up.
- Views of 3D models – perspective and orthographic.
- The geometric structure of models – vertex, edge, polygon/face, element, and surface normal.
- The structure of different polygons – triangles, quads and n-gons.
- Different methods of creating models – polygonal modelling and spline/curve-based modelling.
- Pivot points.
- UV coordinates.
- Mapping methods – planar, box, cylinder, spherical, unwrapping and pelt.
- The materials used on 3D models.
- The creation and use of convex collision hulls.
- Level of detail models (LODs).
- Vertex colour information.
- Model constraints – polygon count and texture size.

A2 Uses of 3D models

- Decorative meshes.
- Environment meshes.
- Modular meshes.
- Meshes used for non-skeletal animation, e.g. doors.
- Skyboxes and skydomes.
- Rigid bodies.
- Fracture/breakable meshes.

Learning aim B: Explore ideas for the production of 3D models

B1 Generate and develop ideas

- Consider context – client brief.
- Generate initial ideas:
  o mind map
  o list
  o initial sketching.
- Consider legal and ethical issues:
  o copyright
  o libel
  o decency
  o representation.
- Research visual sources:
  o internet photographs
  o own photographs
  o printed materials
  o screenshots of comparable games
  o explanation of thinking.
- Develop and finalise ideas:
  o development drawings
  o explanation of thinking
  o final decision with reasons.

- Prepare own reference images:
  - preparing to scale
  - drawing by hand or in a software package
  - top, side and front views
  - aligning images in a graphics package.
- Gather texture assets:
  - library assets
  - self-created assets
  - internet assets
  - permissions
  - diffuse and specular maps
  - albedo/base colour, roughness and metalness maps
  - normal maps.

Learning aim C: Develop 3D models for use in a 3D game engine

C1 Create 3D models

- Setting up layers.
- Importing and setting up reference images – virtual studio or background images.
- Checking scale to match the 3D engine.
- Creating initial geometry – primitives.
- Editing geometry to fit reference images – polygonal modelling, e.g. extrude, chamfer, and curve/spline-based modelling, e.g. lathe, loft.
- Smoothing – smoothing groups and subdivision smoothing.
- Optimising – removing surplus geometry and triangulation.
- Attaching submodels.
- Creating convex collision hulls.
- Unwrapping and packing UVs for textures and lightmaps.
- Sourcing and editing or creating textures and maps.
- Setting up materials.

C2 Set up 3D models in a 3D game engine

- Checking naming conventions, e.g. UCX_.
- Checking pivot points.
- Exporting with appropriate file type, e.g. fbx.
- Importing meshes and textures to the engine.
- Setting up and checking materials.
- Checking collisions.
- Checking lightmapping.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand the structure and use of models for 3D games		**A.D1** Evaluate examples of how 3D models are structured and used in 3D games.
A.P1 Explain how 3D models are structured for use in 3D games. **A.P2** Explain how 3D models are used in 3D games.	**A.M1** Analyse examples of how 3D models are structured and used in 3D games.	
Learning aim B: Explore ideas for the production of 3D models		**B.D2** Produce creative and comprehensive ideas generation and development for the creation of 3D models.
B.P3 Produce appropriate ideas generation and development for the creation of 3D models. **B.P4** Produce appropriate reference images for the creation of 3D models.	**B.M2** Produce detailed ideas generation and development for the creation of 3D models, exploring a range of ideas. **B.M3** Produce accurate and detailed reference images for the creation of 3D models.	
Learning aim C: Develop 3D models for use in a 3D game engine		**C.D3** Create meticulously textured 3D models that are convincing in a game engine, showing proficient use of modelling techniques.
C.P5 Create textured 3D models for use in a game engine using both polygonal and curve/spline-based modelling. **C.P6** Demonstrate appropriate set up of 3D models in a game engine.	**C.M4** Create well textured 3D models that are effective in a game engine, using diverse techniques with confidence and fluency.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.P4, B.M2, B.M3, B.D2)

Learning aim: C (C.P5, C.P6, C.M4, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- 3D-modelling software capable of implementing the unit content
- 3D game engine capable of implementing the unit content
- a texture and maps library for creating materials
- graphics editing software to create and edit texture maps.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will demonstrate their understanding of the content and have an overview enabling them to evaluate examples of it. They will discuss the effectiveness of specific examples and the significance of their contribution to the structure of a mesh and how 3D models are used. They will provide an evaluative conclusion discussing the relative importance of the different aspects of model structure and the different uses of models. Learners might consider how to balance the desirability of quads with primitive types and modelling methods which don't produce them as well as alternative approaches to the same model. They might consider how the benefits of modularity have to be balanced against the need to avoid too much repetition, and how this can be achieved by judicious use of one-off environment meshes and creative combinations of modular pieces. Learners' coverage of the content will be comprehensive, but they should not be refused a distinction on the basis of exceptional gaps or errors in otherwise excellent work.

For merit standard, learners will analyse specific examples of more than half the features they explain. They might analyse how a model has been constructed with quads to allow for efficient subdivision of the resulting mesh. They might assess the importance of modular meshes in reducing memory usage, creating visual consistency and saving time. Learners' work may have occasional gaps in content or occasional errors, but these will be rare.

For pass standard, learners will successfully describe the different elements of 3D models, explaining their contributions, for example describing a triangle in a mesh but also explaining why it is the fundamental building block of a mesh. Learners will explain the different roles that models play in 3D games. They might explain how modular meshes are designed to enable construction of large environments from a relatively small number of meshes. Learners' work will cover the bulk of the content and be substantially accurate.

Learning aim B

Learners will plan to make five or six models, but some or all of these may well be submodels of one more complex piece. In this case, research into the different aspects of this piece will be thorough, as will development, and there will be one full set of detailed reference images. Learners producing five or six separate simpler models, which is more likely to be true at pass standard, will divide their energies between these and so, for example, there may only be a reference image for one view of each model.

For distinction standard, learners will be thorough and creative at all stages, as shown in their comments on all solid bullet points in the content (including the final reference), in wide-ranging research, and in a variety of development drawings etc., displaying thorough attention to detail. Learners will fit their idea carefully to the given context and show some sort of originality that will be documented in their comments on their final design. This does not mean that learners have to come up with something never seen before in a game, but that they bring something new to the type of model they are creating.

For merit standard, learners will produce work that is detailed for almost all of the solid bullet points in the content, as shown in their comments on research images, development drawings etc. and/or in the detail of the designs themselves. Learners' final reference images will be well detailed, accurately scaled and positioned to line up in the chosen 3D package.

For pass standard, learners will produce work that is appropriate and fit for purpose. They will provide at least some evidence for each solid bullet point in the content although some of it may be brief. Their final reference images may be limited and have some inaccuracies but will be usable as reference in the chosen 3D package. Learners may have struggled to design five or six models or submodels, but the minimum to pass is three.

Learning aim C

Learners will plan and make five or six models or submodels. They will use both polygonal and curve/spline-based modelling, but there is no requirement for balance between these two and most of the models can use only one method.

As it can be difficult to see exactly what modelling techniques and features of the game engine have been used, it is good practice for learners to keep a record of what they do so they can be credited for it properly when their work is assessed.

For distinction standard, learners will produce models that are meticulous and convincing, constructed using techniques with proficiency and showing ability with a wide variety of modelling tools. For polygonal modelling, for example, this would mean working with vertex, edge and polygon sub-objects and using techniques such as scale, move, rotate, extrude, bevel, inset, connect, chamfer, weld, bridge and hinge. The resulting mesh will be 'clean': free of n-gons, noticeable hidden edges and surplus geometry. Learners will attach submodels unless there is good reason for them not to. Their model will be divided into effective smoothing groups and mapping will be highly efficient, with no stretching or uneven scaling of textures, UV shells efficiently packed into a texture square and a flattened lightmap using a separate UV channel and appropriate padding. Separate, efficient collision hulls will be created in the 3D modelling package.

Learners will export models from the modelling software and set up in the engine precisely. Scale will be exact and carefully placed pivot points will allow for accurate placement in the game world. Collison hulls will be imported and function accurately. Lightmaps will function extremely well, with no bleeding between different areas. Overall, learners' models will look impressive and convincing in the engine.

For merit standard, learners will produce effective models using diverse techniques smaller in scope than those used in distinction work, although not narrow. Their mesh will be mostly clean and properly smoothed, but there may still be occasional problems, inefficiencies or areas that have been overlooked. Their mapping will be mostly effective but may include some unevenness in scaling or slight stretching. Where there are problems, they will not be obtrusive in-game.

Learners' models will be correctly set up in the game engine and look effective, their materials also set up and displayed correctly with diffuse/albedo/base colour and normal maps as a minimum. Lightmaps, scale, pivot points and collision hulls will generally work well, but there may be some minor problems such as slight lightmap bleed because of insufficient padding. Again, where there are problems, they will not be obtrusive in-game.

For pass standard, learners will use a narrow range of modelling techniques and may suffer from a significant number of problems but they will create appropriate models in non-trivial ways. It will not be sufficient to pass if learners, for example, call a box primitive a storage crate and they will produce some modelling at the sub-object level. Learners may have struggled to map their models but there will be clear evidence that they have tried to do so, and the appearance of the textures will be better than if they had not done so.

Learners' models will function properly in the game engine and look appropriate with diffuse/albedo/base colour maps as a minimum, although there may be problems with scale, pivot points and lightmapping. They may need to auto-generate collision hulls with the engine in order to get collisions to work properly; their own collision hulls may be oversimplified, but they will function correctly. As with planning, there will be a minimum of three models or submodels set up in the engine to pass.

Links to other units

This unit links to:

- Unit 37: Visual Effects
- Unit 41: 3D Environments
- Unit 43: 3D Digital Animation.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:

- guest speakers
- opportunities to visit suitable exhibitions.

Unit 41: 3D Environments

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners will understand the components of 3D environments and texture types. They will plan a 3D environment, make textures for it and build it in a 3D game engine.

Unit introduction

Most 3D games depend on their environments – a good-looking, immersive game world is where all the action will take place. 3D models are part of this, but a good environment artist needs to be able to create the materials that will really make things look effective and use all the resources of the game engine to make the game come to life.

You will learn about the different tools in a 3D game engine that enable a game world to look really good and the different types of textures that make models, terrain and other game elements look so impressive. You will plan and create graphics to go on models and surfaces in a game environment before planning and building that environment.

This unit will give you some of the key skills necessary to be an environment artist. The work you produce can form part of your portfolio for progression to employment or higher education.

Learning aims

In this unit you will:

A Understand 3D game environments

B Design a 3D game environment

C Produce a 3D game environment in a 3D game engine.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand 3D game environments	**A1** Components of 3D game environments **A2** Texture and map types	A report or presentation which examines the different components of 3D game environments and the texture and map types used in the 3D game environments.
B Design a 3D game environment	**B1** Design the 3D game environment **B2** Design graphics for the 3D game environment	Scale plans for the 3D environment. A list of maps, textures, photographs and permissions needing graphics planning, e.g. sketches, descriptions, mood boards.
C Produce a 3D game environment in a 3D game engine	**C1** Produce graphics for the 3D game environment **C2** Produce the 3D game environment	Separate files of all graphics created, including original photographs and details of any downloaded assets used with documented permissions. Finished 3D environment in the authoring software. Record of game engine features used.

Content

Learning aim A: Understand 3D game environments

A1 Components of 3D game environments

- Primitives/constructive solid geometry.
- Terrain.
- Materials and shaders.
- Static meshes.
- Lighting – global illumination, light types.
- Shadows.
- Animation – path-based, skeletal.
- Volumes.
- Particle systems.
- Triggers.
- Sounds.
- AI pathing.
- Physics.

A2 Texture and map types

- Physically-based shading and conventional materials.
- Maps for conventional materials.
- Diffuse.
- Specular.
- Gloss.
- Maps for physically-based shading.
- Albedo/base colour.
- Roughness.
- Metalness.
- Other maps.
- Normal – for high and low frequency details.
- Emissive.
- Opacity.
- Ambient occlusion.
- Height – for parallax/offset, parallax occlusion and terrain.
- Particle textures.
- Decal textures.
- Detail textures.

Learning aim B: Design a 3D game environment

B1 Design the 3D game environment

- Consider context, e.g. client brief.
- Constraints.
- Available models to texture.
- Available library assets – models, textures, particle systems, sounds.
- Constraints of chosen engine.
- Legal and ethical issues.
- Initial ideas.
- Mind map.
- List.
- Initial sketching.
- Development of ideas.

- Internet photographs.
- Own photographs.
- Printed materials.
- Screenshots of comparable games.
- Sketches.
- Mood boards.
- Spoken and written descriptions.
- Other appropriate methods.
- Explanation of thinking.
- Final environment design.
- Scale drawing.
- Utilisation of existing assets.
- Explanation of thinking.
- Identification of additional graphics needed.

B2 Design graphics for the 3D game environment
- Graphic style:
  - o to match existing assets
  - o to match planned environment.
- Map and texture list.
- Initial ideas:
  - o mind map
  - o list
  - o initial sketching.
- Research visual sources:
  - o internet photographs
  - o own photographs
  - o printed materials
  - o screenshots of comparable games
  - o explanation of thinking.
- Development of ideas:
  - o internet photographs
  - o own photographs
  - o printed materials
  - o screenshots of comparable games
  - o sketches
  - o mood boards
  - o spoken and written descriptions
  - o other appropriate methods
  - o explanation of thinking.
- Final planning of individual graphics:
  - o sketches
  - o tiling materials
  - o materials to fit UV templates from existing models
  - o maps for conventional materials or physically-based shading
  - o normal maps
  - o other maps
  - o particle textures
  - o decal textures
  - o detail textures
  - o macro textures
  - o explanation of thinking.

- Photographs needed.
- Permissions.

Learning aim C: Produce a 3D game environment in a 3D game engine

C1 Produce graphics for the 3D game environment

- Appropriate photographs.
- Dimensions.
- Utilities, e.g. grid.
- Brushes.
- Filters.
- Layers and groups.
- Layer styles.
- Blend modes.
- Masks.
- Adjustments.
- Selection.
- Other tools e.g. clone stamp.
- Alpha channels.
- Tiling methods.
- Normal map creation methods, e.g. nVidia normal map filter.
- Export file types appropriate for the engine, e.g. TGA.

C2 Produce the 3D game environment

- Gather assets – library, import.
- Create geometry and/or terrain.
- Create, edit, apply, scale and align materials.
- Add and manipulate static meshes.
- Set up physics meshes.
- Set up animation.
- Set up triggers.
- Create, edit and add particle systems.
- Set up sound – ambient, triggered, music.
- Set up lighting.
- Create and add other appropriate features, e.g. water.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Understand 3D game environments		**A.D1**	Evaluate examples of texture and map types and the components of 3D game environments.
A.P1 Explain the components of 3D game environments. **A.P2** Explain the texture and map types used in 3D game environments.	**A.M1** Analyse examples of texture and map types and the components of 3D game environments.		
Learning aim B: Design a 3D game environment		**B.D2**	Produce a comprehensive design and graphics planning for a 3D environment.
B.P3 Produce an appropriate design for a 3D environment. **B.P4** Produce appropriate planning for the graphics for the 3D environment.	**B.M2** Produce a detailed design and graphics planning for a 3D environment.		
Learning aim C: Produce a 3D game environment in a 3D game engine		**C.D3**	Create an imaginative and polished 3D game environment with proficient use of game engine features.
C.P5 Create appropriate graphics for the 3D game environment. **C.P6** Create an appropriate game environment.	**C.M3** Create effective graphics for the 3D game environment. **C.M4** Create a creative game environment with effective use of game engine features.		

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.P4, B.M2, B.D2)

Learning aim: C (C.P5, C.P6, C.M3, C.M4, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- a 3D game engine capable of implementing the unit content
- existing environments/games to analyse and evaluate
- graphics editing software to create and edit texture maps
- a normal map creation tool
- simple meshes with UV layouts rendered out.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will assimilate the content and have an overview, enabling them to evaluate examples. They will discuss the effectiveness of specific examples and the significance of their contribution to the overall game environment. They will include an evaluative conclusion discussing the relative importance of the different components and map types. Learners may consider the advantages and disadvantages of how realtime and pre-computed lights have been used in a particular environment. When discussing the texture and map types, learners might compare examples of physically-based shading and conventional materials to bring out their strengths and weaknesses. In general, they will cover the content comprehensively, but should not be declined a distinction on the basis of exceptional gaps or errors in otherwise excellent work.

For merit standard, learners will analyse specific examples of more than half the features they explain. They will examine in detail how the examples work, but there will be little evaluation of their significance or their strengths and weaknesses. Learners may analyse how a particle system is triggered by the player to create a specific effect in a level. When discussing the texture and map types, they may analyse how normal maps are used to create the impression of 3D detail in otherwise flat surfaces, and how different maps for low and high frequency details have been combined. Learners' work may have occasional gaps in content or occasional errors, but these will be rare.

For pass standard, learners will successfully explain the different elements of 3D environments and the different map and texture types. They will not use specific examples or, if they do, the examples will be perfunctory and will not be analysed to show how they work. Learners' work may explain how point lights, spot lights and directional lights are different from one another. When discussing the texture and map types, learners might explain how decals function like stickers in an environment for things like graffiti. Learners will cover the bulk of the content and be substantially accurate.

Learning aim B

Learners have to plan both the environment and the graphics they will create for it. Learners are not expected to create all the graphics for the environment and will be using some library assets which come with the engine being used or have been provided by teachers. They are expected to plan to create a range of graphics that will blend well with the library assets chosen and fit their chosen environment. They are not expected to make any meshes for the environment, although they may have done so as part of another unit, but they are expected to create graphics to fit the UV layout of an existing mesh which will probably be provided by teachers. This mesh can be very simple – it is how the textures have been designed for it that matters.

For distinction standard, learners will create a comprehensive plan of the environment and the graphics they need to create for it. They will produce an accurate scale design of the environment, either produced on paper or rendered out from a prototyping tool and with clear dimensions appropriate to the chosen engine added on. They will identify and locate on the design all the intended library assets, with all additional graphics needed clearly listed. As a minimum, learners will plan to create a tiling material, a material to fit the UV layout of an existing mesh, a decal texture and a particle texture. Their plans may include detailed sketches, written or spoken explanations of what they are aiming for, mood boards, visual research or other planning methods and will be comprehensive so that any other reader will have an unequivocal vision of what the final product will be like. Their plans will include detailed visual and verbal material and they will address different map types separately in their planning, for example considering the different high and low frequency normal maps required as well as possibly exploring interesting additional maps such as emissive and detail textures.

For merit standard, learners will create detailed plans. Their environment design will be roughly to scale and/or have clear dimensions, but there may be occasional gaps or errors. They will identify and locate on the design intended library assets with any additional graphics needed listed, but there may again be occasional gaps. As a minimum, learners will plan to create a tiling material, a material to fit the UV layout of an existing mesh, and either a decal texture or a particle texture. Their plans may include sketches, written or spoken explanations of what they are aiming for, mood boards, visual research or other planning methods and will be detailed so that any other reader will have a clear sense of what the final product will be like, shown visually, verbally, or in a combination of both. Learners may not address different map types separately in their planning, but the overall look they are aiming at will be clear.

For pass standard, learners will produce plans that are appropriate and fit for purpose. Their environment design may not be accurately to scale and may lack clear dimensions, but their intentions will be clear to a third party. They will identify some intended library assets but these may not be located on the design. Learners will list any additional graphics needed, but there may again be gaps. They will plan to create tiling materials and materials to fit the UV layout of an existing mesh, but are unlikely to attempt anything else. Their plans may include sketches, written or spoken descriptions of what they are aiming for, mood boards with visual research or other planning methods, but they will lack detail and give only a general impression of what they are intending to create.

Learning aim C

Learners have to produce graphics and the finished environment. Learners may create all their graphics from scratch in the graphics software or they can use photographs they take themselves as the basis of some of their work. Learners may use copyright free resources in the production of their graphics, but it is envisaged this might be things like copyright free brushes. The central part of learners' work must be their own, so learners must not, for example, find a copyright free tiling brick texture and use this to produce a brick material to meet the essential requirement of producing a tiling material.

It can be difficult to see exactly what features of the game engine have been used and it is good practice for learners to keep a record of what they use and the settings they change so they can be credited for it properly when their work is assessed. Learners should not be credited for things that are part of a default map or template.

For distinction standard, learners will create a polished and imaginative 3D environment. They will produce at least one tiling material and at least one material to match the UV layout of an existing model, with diffuse/albedo/colour, normal and specular/roughness maps for each. In addition, learners will create a particle texture and a decal texture. Their materials will tile perfectly, high and low frequency normal maps will work together extremely well, and specular or roughness maps will create imaginative variety. Their additional maps, such as emissive, will be imaginatively created and set up in the engine and their particles and decals will work extremely well. Learners will create graphics that are completely consistent with those from the library, creating a harmonious whole. They will show a proficient use of the game engine by using a wide range of features extremely well, and are likely to have explored many of their settings. Lights, for example, may be used with materials to create imaginative effects variously known as cookies, projectors or light functions. Learners will clearly list what they have done in the associated documentation. Their end result will be polished and atmospheric with no errors or problems.

For merit standard, learners will create effective graphics and a creative environment using a range of game engine features. They will produce at least one tiling material and at least one material to match the UV layout of an existing model, with diffuse/albedo/colour, normal and specular/roughness maps for each. In addition, learners will create at least one of either particle or decal textures. Their graphics will look effective and convincing in the game engine and will be mostly consistent with each other and with the library assets. Learners will use fewer features of the game engine and explore them in less depth than distinction learners, but there will still be a documented range. Typically, this might include more than one light type, ambient and triggered sounds, animation using systems within the engine such as doors and lifts, some physics meshes and particle systems which have been edited and/or triggered as well as the meshes and materials needed. For all work, there may be some errors or problems on close examination, but the overall impression will be that the graphics and environment do their job well.

For pass standard, learners will create appropriate graphics and environment. They will produce at least one tiling material and at least one material to match the UV layout of an existing model, with diffuse/albedo/colour, and normal maps for each. Their graphics will be suitable for the environment but they may not be very consistent with each other and/or the library assets. Learners may use a limited range of features from the engine and rely mainly on default settings. For example, they may only use one light type, but the environment will be appropriately textured and will have appropriate meshes in it. For all work, there may well be noticeable errors or problems, but the environment will still be recognisably what was intended.

Links to other units

This unit links to:
- Unit 40: 3D Modelling
- Unit 43: 3D Digital Animation.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities to do so.

This unit would benefit from employer involvement in the form of:
- guest speakers and interview opportunities
- opportunities to visit suitable exhibitions.

Unit 42:   Games Testing

Level: **3**

Unit type: **Internal**

Guided learning hours: **60**

Unit in brief

Learners understand quality assurance (QA) in the games industry, testing games using a bug tracking system and developing their own test cases.

Unit introduction

Testing games is fundamental to their success. There is little more damaging to a game than serious unfixed bugs when the game is released. The QA team are vital in preventing this. QA involves playing games for a living, but playing them systematically to check everything that could possibly go wrong, and then doing it again when bugs have been fixed.

You will learn the key information about the games industry, and the development and testing process that you need for a job in QA. You will test one or more games thoroughly, looking for all the errors, and recording all bugs on a bug tracking system. When the developer fixes those bugs, you will check that they have been fixed and that the fixes have not introduced any new bugs; a process called regression testing. You will then design your own tests for a game, called test cases, and record the results on a properly formatted spreadsheet.

This unit will give you the key skills necessary to apply for an entry-level testing job in the games industry. You could also use the unit as a basis for further study to be a games producer or to enhance your suitability for other roles in the industry.

Learning aims

In this unit you will:

A Understand quality assurance in the games industry

B Explore playtesting of games

C Develop test cases for testing games.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Understand quality assurance in the games industry	**A1** Aspects of the gaming sector **A2** Quality assurance	A report or presentation outlining the aspects of the games sector and game testing.
B Explore playtesting of games	**B1** Test a game using a bug tracking system	Completed bug reports on a bug tracking system, including regression-testing bug fixes.
C Develop test cases for testing games	**C1** Design test cases **C2** Run and record test cases	Written description of test cases, including decision tables. Completed test cases spreadsheet.

Content

Learning aim A: Understand quality assurance in the games industry

A1 Aspects of the gaming sector

- Platforms:
  - console
  - browser
  - handheld
  - mobile and tablet
  - PC.
- Control and input methods:
  - platforms
  - console
  - browser
  - handheld
  - mobile and tablet
  - PC.
- Display types:
  - screen
  - 3D
  - virtual reality (VR)
  - projection
  - wearables
  - audiences
  - hardcore, mid-core, casual, niche
  - demographics
  - by genre (e.g. massively multiplayer online role-playing game)
  - for e-sports.

A2 Quality assurance

- Developing games:
  - Agile development methods (e.g. scrum):
    – team organisation
    – iterative approach with frequent builds
    – close cooperation between team members and other teams
    – frequent and regular face-to-face conversations and meetings.
  - development milestones:
    – prototype
    – first playable
    – alpha
    – beta (open and closed)
    – release to manufacturing/production (gold master)
    – patching.
  - build numbers.
- Testing games:
  - purposes of testing:
    – functionality testing
    – compatibility testing
    – compliance testing (e.g. technical requirements checklist and technical certification requirements)
    – legal testing (e.g. for copyright breaches)
    – localisation testing.

- types of testing:
  - ad hoc testing
  - smoke testing
  - black box testing
  - playtesting
  - regression testing.
- error types:
  - collision
  - graphics and textures
  - audio
  - gameplay, including Artificial Intelligence (AI)
  - game controls
  - display, including frame rate and camera angles
  - user interface
  - crash/hang.
- severity grading:
  - critical
  - major
  - minor.
- reproducibility.

Learning aim B: Explore playtesting of games

B1 Test a game using a bug tracking system

- Bug tracking system:
  - ID
  - category
  - status (unassigned, assigned, modified, resolved)
  - date submitted
  - date updated
  - priority
  - severity
  - reproducibility
  - build number
  - summary/title
  - description
  - steps to reproduce
  - supporting evidence (e.g. screenshots, error messages)
  - fix details.
- Systematically test existing game:
  - collision
  - graphics and textures
  - audio
  - gameplay
  - game controls
  - display, including frame rate and camera angles
  - user interface
  - artificial intelligence (AI)
  - crash/hang.
- Complete bug reports on bug tracking system:
  - accuracy
  - clarity
  - concise, with appropriate detail.

- Regression test:
  - thoroughly check fixed errors
  - update bug tracking system, closing issues as appropriate
  - check any subsequent fixing.

Learning aim C: Develop test cases for testing games

C1 Design test cases

- Test case structure:
  - functionality to be tested
  - known input
  - expected output
  - definition of pass and fail.
- Choice of test cases:
  - game specification (e.g. design document)
  - specific features to test.
- Decision tables for complex features:
  - condition stubs
  - condition entries
  - action stubs
  - action entries
  - range of test cases derived from decision table.

C2 Run and record test cases

- Test case header information (e.g. project and test case titles).
- Test case layout:
  - objective
  - date
  - description
  - expected result
  - actual result
  - pass/fail
  - severity
  - execution history
  - other relevant information (e.g. remarks/comments).
- Spreadsheet design:
  - basic formatting and layout
  - conditional formatting (e.g. green fill if passed)
  - drop down selection in cells (list validation)
  - functions (e.g. if, lookup).
- Systematic completion of test cases.

Assessment criteria

Pass	Merit	Distinction
Learning aim A: Understand quality assurance in the games industry		**A.D1** Evaluate the importance of different aspects of quality assurance in the gaming sector and examples of the process of developing and testing games.
A.P1 Explain the aspects of the gaming sector. **A.P2** Explain the process of developing and testing games.	**A.M1** Analyse examples of different aspects of the gaming sector bug reports in a bug tracking system. **A.M2** Analyse examples of the process of developing and testing games.	
Learning aim B: Explore playtesting of games		**B.D2** Thoroughly playtest a game and produce in-depth regression tested bug report in a bug tracking system.
B.P3 Playtest a game appropriately and produce understandable regression tested bug reports in a bug tracking system.	**B.M3** Playtest a game in detail and produce clear regression tested bug reports in a bug tracking system.	
Learning aim C: Develop test cases for testing games		**C.D3** Create complex test cases, including a detailed decision table and a complex spreadsheet record.
C.P4 Create a test case appropriate for the game being tested. **C.P5** Create a spreadsheet record appropriate for a specific test case.	**C.M4** Create detailed test cases, including a simple decision table and a detailed spreadsheet record.	

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.M2, A.D1)

Learning aim: B (B.P3, B.M3, B.D2)

Learning aim: C (C.P4, C.P5, C.M4, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- a bug tracking system, either a third party product or an internal system that enables the delivery of the unit content and can be updated by a tester and a developer
- games with bugs to be tested, that can be fixed in the light of bug reports produced either by other learners or by the tutor
- games which can be used to develop test cases, including decision tables produced either by other learners or by the teacher
- spreadsheet software.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will demonstrate that they have fully assimilated the content and have an overview enabling them to evaluate examples of it. They will have a clear overview of the significance of different aspects of the gaming sector and upcoming developments. Learners' work is likely to consolidate different aspects of the content, on the nature of the gaming sector. For example, distinction learners might evaluate the continuing significance of the PC with hardcore gamers, partly because of the advantages of keyboard input for some role-playing and strategy games. In terms of the development and testing of games, learners might evaluate examples of the different types of errors and their impact on the success of the final product.

For merit standard, learners will analyse the working of at least half of each part of the content, through specific examples. In terms of the gaming sector, learners' work might analyse how the rapid growth of smartphone and tablet ownership has driven an increase in games using touch sensitivity. Their work may consolidate different aspects of the content on the nature of the gaming sector but may not be entirely convincing. In terms of the development and testing of games, learners might analyse why compliance testing demanded by the different platform holders is so important. Learners' work may have occasional gaps in content or occasional errors, but these will be rare.

For pass standard, learners will successfully explain the different game platforms, agile development methods and the process of developing and testing games. They will not use specific examples, or the examples will be perfunctory and not analysed to show their significance. For the aspects of the gaming sector, their work might explain that there are a wide range of peripheral controllers available, such as steering wheels, mats, instruments etc. which enhances the playing experience. In terms of the development and testing process, a pass learner might explain that an open beta test enables developers to get extensive feedback from actual players, and is particularly helpful for testing the functionality of multiplayer systems. Learners' work will accurately cover at least three quarters of each part of the content.

Learning aim B

Learners need to systematically test a game, looking for as many errors as possible. They could test a game produced by another learner as part of another unit, or they could test a game produced by the teacher. If learners test a game produced by another learner, care must be taken to ensure they test an early enough version to contain sufficient errors to cover the unit content. Teachers will need to work with example games for the teaching of the content, but learners must be given different games for assessment.

Bug tracking systems can be third party or developed in the centre, but must be collaborative. Learners testing the game will produce bug reports, but they must be updated by someone acting as the developer (tutor or another learner), with details of any fix. Learners will then regression test the fixes and update the reports. This process should be repeated if the error is not properly solved, but learners should not to go through this cycle multiple times if the developer cannot competently fix the identified errors.

For distinction standard, learners will playtest a game thoroughly, identifying hard to find errors. Learners will go on to thoroughly regression test all bug fixes, to see if they have indeed been corrected and/or if other errors have been introduced. Learners will show thoroughness in their testing by covering several different types of errors and several errors within each type. Exactly what, will depend to an extent on the game being tested. Typically the expected standard would be producing bug reports that cover five types of errors from collision, graphics and textures, audio, gameplay, game controls, display, user interface and crash/hang, with the total number of reports not being less than twelve. Learners who find themselves testing an unusually buggy game, should not be expected to produce more than this, even though their testing has identified many more errors; an observation record could make this clear. The bug reports will be detailed and in-depth, so that the developer can easily see what the problem is and how to re-create it. The language used will be accurate in terms of spelling, basic punctuation and grammar.

For merit standard, learners will playtest a game in detail, identifying subtle errors as well as the more obvious ones. Learners will go on to successfully regression test most bug fixes, to see if they have indeed been corrected and/or if other errors have been introduced. Learners will show detail in their testing, by covering different types of error and different errors within each type. Exactly what, will depend to an extent on the game being tested. Typically the expected standard would be producing bug reports that cover four types of errors from collision, graphics and textures, audio, gameplay, game controls, display, user interface and crash/hang, with the total number of reports being not less than eight. The bug reports will be clear so that the developer can see what the problem is and how to re-create it. The language used will be accurate in terms of spelling, basic punctuation and grammar, although there may be occasional errors.

For pass standard, learners will playtest a game appropriately, identifying obvious errors. Learners will go on to regression test some bug fixes, to see if they have indeed been corrected and/or if other errors have been introduced. Their regression testing will be mostly successful, although they may not always identify minor errors remaining after a bug has been partially fixed. The expected standard would be producing bug reports that cover three types of errors from collision, graphics and textures, audio, gameplay, game controls, display, user interface and crash/hang. The bug reports will be understandable, so that the developer can work out what the problem is and how to re-create it, even if the language used has errors and is not always clear.

Learning aim C

For this learning aim, learners can work with games produced by other learners, but to ensure the content can be covered appropriately for decision tables and dependencies, it will probably be better to work with a game or games provided by teachers. Teachers will need to work with example games for the teaching of the content, but learners must be given different games for assessment.

For distinction standard, learners will produce complex work. A decision table looking at appropriate movement of an avatar in a 2D game, controlled through the keyboard, would have condition stubs covering all relevant movement keys as well as non-movement keys. Action stubs might cover appropriate sounds, movement direction, sprite choice and correct animation. The resulting decision table will have been thoroughly completed and a complete set of test cases derived from it. Spreadsheets will include all relevant information, be clearly laid out, and correctly use conditional formatting, drop down lists and at least one function. They will have been thoroughly and accurately completed.

For merit standard, learners will move beyond simple test cases, constructing a decision table deriving a complete set of test cases from it. The work will not be as complex as the distinction standard, so decision tables may have only one or two decision stubs and four or five action stubs, or vice versa. Where work is at the level of complexity for distinction, it will contain occasional errors or be missing one or two key elements. The test cases derived from the decision table will fully reflect that work. Spreadsheets will include all the test cases set up by learners and include conditional formatting, drop down lists or a function. Where several features are attempted, they may not all be successfully used. Spreadsheets will have been accurately completed, although there may be occasional gaps or errors.

For pass standard, learners will design at least one test case that will have a clear written description correctly identifying what feature is to be tested, the necessary input or action, the expected output and what will count as pass and fail. Learners are unlikely to attempt to construct decision tables or analyse dependencies. Where the work includes them, they will be trivial, or poorly done, or both. Spreadsheets will contain project title, objective, date, description, expected result, actual result and pass/fail as a minimum and will have been correctly filled in for straightforward test cases. If learners have attempted more complex cases based on decision tables, they may be incomplete or inaccurate. Conditional formatting, drop down lists and functions will not be attempted or not used correctly.

Links to other units

This unit links to:

- Unit 13: Digital Games Production
- Unit 34: Game Engine Scripting.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities.

This unit would benefit from employer involvement in the form of:

- guest speakers
- opportunities to visit suitable exhibitions.

Unit 43: 3D Digital Animation

Level: **3**
Unit type: **Internal**
Guided learning hours: **60**

Unit in brief

Learners will explore the purposes, development and technical characteristics of 3D animation while developing the appropriate skills themselves.

Unit introduction

3D animation is extensively used for a variety of purposes. In the TV and film sectors, most animations that would once have been stop motion now use digital 3D animation, with many productions combining digital 3D animation with live action. In the games sector, 3D animations are often used for cutscenes as well as in the games environments themselves.

In this unit, you will learn about the different uses of 3D animation and develop skills in digital tools and techniques, creating a final 3D animation for use in a media product.

The skills you will develop in this unit can be applied to digital animations for a range of different purposes, and the 3D animation you produce for this unit can form part of a digital portfolio of work for progression to employment or higher education.

Learning aims

In this unit you will:

A Examine the purposes and techniques of 3D animation used in the media industry
B Explore the use of 3D animation tools and techniques for a specific media product
C Create a digital 3D animation for a specific media purpose.

Summary of unit

Learning aim	Key content areas	Recommended assessment approach
A Examine the purposes and techniques of 3D animation used in the media industry	**A1** Uses of digital 3D animation in different media sectors **A2** The development of digital 3D animation **A3** The technical considerations of digital 3D animation	A report that examines traditional and digital examples of the purposes, techniques and technical characteristics of 3D animation.
B Explore the use of 3D animation tools and techniques for a specific media product	**B1** Digital 3D animation tools and techniques	Two fully developed ideas for a digital 3D animation demonstrating the use of different tools and techniques, supported by an annotated ideas development portfolio and including initial ideas and experimentation.
C Create a digital 3D animation for a specific media purpose	**C1** Planning a digital 3D animation **C2** Producing a digital 3D animation **C3** Evaluating a digital 3D animation	A planning and production log, including a schedule, asset management and evaluating the creative and technical choices made throughout. A final 3D animation published for a specific media purpose.

Content

Learning aim A: Examine the purposes and techniques of 3D animation used in the media industry

A1 Uses of digital 3D animation in different media sectors

- 3D animation in TV and film.
- Narrative animation.
- Music videos.
- Advertisements.
- Idents and title sequences.
- 3D animation in digital games.
- Walkthroughs and simulations.
- Uses of different styles of digital 3D animation to appeal to different audiences.

A2 The development of digital 3D animation

- Influential pre-digital 3D animators, including Willis O'Brien and Ray Harryhausen.
- The development of digital 3D animation techniques.
- 1970s wireframe animations.
- 1980s uses of CGI and morphing.
- Motion capture.
- Compositing with live action footage.
- Machinima.

A3 The technical considerations of digital 3D animation

- Appropriate software for the intended purpose.
- Polygon count.
- File size.
- Rendering time.

Learning aim B: Explore the use of 3D animation tools and techniques for a specific media product

B1 Digital 3D animation tools and techniques

- Reference coordinate system and object hierarchy.
- Pivot points.
- Key frame animation.
- Kinematics.
- Trajectories.
- Animation layers.
- Curve and schematic editors.
- Morphing.
- Particle systems.
- Real world physics.
- Biped character rigging and animation, including walk cycles.
- Animating visual elements:
  - animating effects
  - animating cameras
  - animating lights, including daylight system.
- Rendering:
  - output formats
  - rendering elements, including alphas.

Learning aim C: Create a digital 3D animation for a specific media purpose

C1 Planning a digital 3D animation

- Ideas generation, brainstorming, thumbnail sketches.
- Analysis of brief, including target audience and any client, production and technical constraints.
- Influence of examples of current or historical 3D animation.
- Legal and ethical issues.
- Scheduling and production milestones.
- Storyboarding.
- Originating or sourcing assets – characters, environment assets.

C2 Producing a digital 3D animation

- Setting up the timeline.
- Asset management.
- Importing and using appropriate assets.
- Animating assets.
- Adding particle systems or effects.
- Rendering the digital 3D animation for use in a media product.
- Time management.

C3 Evaluating a digital 3D animation

- Creative decisions and how they are influenced by contemporary practice.
- The techniques used.
- The constraints of the brief, including suitability for the intended purpose and platform.
- Audience response – intended and actual.

Assessment criteria

Pass	Merit	Distinction	
Learning aim A: Examine the purposes and techniques of 3D animation used in the media industry		**A.D1**	Evaluate examples of digital 3D animation to show the development of techniques and their effectiveness in fulfilling different purposes.
A.P1 Explain the purposes of digital 3D animation across media sectors. **A.P2** Explain the development and technical constraints of digital 3D animation.	**A.M1** Analyse examples to show the purposes, characteristics and development of digital 3D animation techniques.		
Learning aim B: Explore the use of 3D animation tools and techniques for a specific media product		**B.D2**	Demonstrate a creative approach when using techniques to develop different ideas for a digital 3D animation in response to a brief.
B.P3 Demonstrate the use of different tools and techniques for digital 3D animations.	**B.M2** Develop effective skills in the use of tools and techniques to develop different ideas for a digital 3D animation in response to a brief.		
Learning aim C: Create a digital 3D animation for a specific media purpose		**C.D3**	Plan and produce a final 3D animation for a specific media product demonstrating accomplished technical skills and justifying the creative choices made.
C.P4 Plan and produce a final 3D animation for a specific media product in response to a brief. **C.P5** Explain the creative choices made when developing a digital 3D animation for a specific media purpose.	**C.M3** Plan and produce a final 3D animation for a specific media product, demonstrating competent technical skills. **C.M4** Evaluate the creative choices made, and the appropriateness of tools and techniques used, when developing a digital 3D animation for a specific media purpose.		

Essential information for assignments

The recommended structure of assessment is shown in the unit summary along with suitable forms of evidence. *Section 6* gives information on setting assignments and there is further information on our website.

There is a maximum number of three summative assignments for this unit. The relationship of the learning aims and criteria is:

Learning aim: A (A.P1, A.P2, A.M1, A.D1)

Learning aim: B (B.P3, B.M2, B.D2)

Learning aim: C (C.P4, C.P5, C.M3, C.M4, C.D3)

Further information for teachers and assessors

Resource requirements

For this unit, learners must have access to:

- scanners (a 3D scanner may also be appropriate)
- digital drawing tablets
- computers and appropriate 3D animation software
- internet access
- traditional drawing materials.

Essential information for assessment decisions

Learning aim A

For distinction standard, learners will evaluate the effectiveness of 3D animation techniques applied to different purposes. Although the selection of purposes may relate to a specific media sector, learners will justify their selection and, in doing so, they will demonstrate an awareness of the use of digital 3D animation in different media sectors. Learners will evaluate examples of 3D animation for the purposes specified, clearly showing how the techniques have developed and become more sophisticated over time. For example, learners may compare contemporary digital examples with compositing digital 3D animation with live action footage in the film sector. Their evaluation of these examples will refer to the suitability for purpose in respect of aesthetic and audience considerations as well as technical. For example, learners may comment that although the use of particle systems for animation in a virtual environment may look effective, games producers must be careful not to overuse these and slow the game down. They will produce evidence in a form that will allow them to compare the different purposes and techniques by means of the use of examples, but this evidence could be presented in a variety of ways such as a report, presentation, blog or even a voice recording over a video sequence of examples used.

For merit standard, learners will analyse examples of 3D animation techniques applied to different purposes. Although the selection of purposes may relate to a specific media sector, learners will demonstrate an awareness of the use of digital 3D animation in different media sectors. Their analysis will use detailed and specific examples of how digital 3D animation techniques are applied to different purposes. Learners will refer to aesthetic, audience and technical considerations in their analysis, but not necessarily in every example and there may be little or no evidence of qualitative judgements being made as to the effectiveness of the examples in fulfilling their purposes.

For pass standard, learners will explain how specific types of media product use 3D animations to serve a purpose and the ways in which digital 3D animation is used in different sectors, but they might not give specific examples to illustrate this. They will explain the development of 3D digital animation techniques, including reference to technical characteristics for specific purposes. For example, learners may observe that, '3D animations for the film industry will be much more detailed and higher poly count than those for use in games.'

Learning aim B

For distinction standard, learners will produce sample digital 3D animation tests in different styles to inform concept ideas for animations. They will demonstrate an individual, creative approach and it is likely that they will combine techniques in interesting or unusual ways. Their work will show a high-level of technical skill and final animations will be free from obvious technical flaws. Their selection and use of tools and techniques will be justified by means of annotation or a blog, in the presentation of the ideas or as a voice-over on a showreel of the ideas produced.

For merit standard, learners will use tools fluently, exploring different techniques effectively to clearly inform ideas, but the different techniques used may be limited in breadth or not combined to creative effect. Their selection and use of tools and techniques will be appropriate and explained by learners, but there will be little evidence of justification of the processes selected.

For pass standard, learners will use digital 3D animation tools and techniques to present ideas, but the range of experimentation may be limited, as may the documentation of the process of using these to inform ideas, and explanations may not always be clear.

Learning aim C

For distinction standard, learners will plan in detail, including an analysis of the brief, scheduling and a clear development of the idea or visual narrative from the ideas stage to trial animations along with other necessary documentation. Learners will evidence the production of the finished digital 3D animation, which may be by means of a log, and they will demonstrate a degree of sophistication and precision in the use of tools and techniques. Their final product does not need to be long but it must be complete, fulfil its purpose and be free from obvious flaws. Learners will export it in an appropriate format for its intended purpose. Their creative and technical choices will be justified, using comparison to historic and contemporary influences, considering legal and ethical issues fully and evaluating fitness for purpose, with reference to the original constraints of the brief and the feedback on the finished product from the client or target audience. They will demonstrate a professional approach to their work, including high attendance to classes and workshops, good timekeeping and meeting all interim and final deadlines.

For merit standard, learners will plan using documentation that includes an analysis of the brief, scheduling and showing a development of the idea or visual narrative from the ideas stage to completed trial animations. Their documentation, however, is likely to lack some detail and be less specific about the different stages. Learners will document the production of the finished digital 3D animation, which may be by means of a log, and they will demonstrate effective use of tools and techniques. Their final product does not need to be long, but it must be complete and suitable for purpose. Learners will export it in an appropriate format for its intended purpose. They will evaluate their creative choices, the influences on their decision making and the appropriateness of tools and techniques used. While there may be minor flaws in the finished product, these will not be immediately obvious.

For pass standard, learners will use appropriate processes to plan and produce the finished animation and document their creative choices. They may not, however, consider all necessary elements of these processes. Their use of tools and techniques may not always be fully appropriate and, although the realisation of the idea will be obvious in the animation, the finished product may not be complete in itself in fulfilling the intended purpose. For example, learners may produce a 3D animation for an ident for a children's TV channel with appropriate animated 3D lettering, but this may simply be shown against a plain background rather than integrated with appropriate imagery or other models as learners had originally planned. Their finished product will be exported and working though not necessarily in the most appropriate format for purpose and it may contain minor, but obvious, flaws.

Links to other units

This unit links to:
- Unit 33: 2D Animation
- Unit 37: Visual Effects
- Unit 40: 3D Modelling
- Unit 41: 3D Environments.

Employer involvement

Centres may involve employers in the delivery of this unit if there are local opportunities to do so.

This unit would benefit from employer involvement in the form of:
- guest speakers
- opportunities to visit suitable exhibitions.

4 Planning your programme

How do I choose the right BTEC National qualification for my learners?

BTEC Nationals come in a range of sizes, each with a specific purpose. You will need to assess learners very carefully to ensure that they start on the right size of qualification to fit into their 16–19 study programme, and that they take the right pathways or optional units that allow them to progress to the next stage.

Some learners may want to take a number of complementary qualifications or keep their progression options open. These learners may be suited to taking a BTEC National Certificate or Extended Certificate. Learners who then decide to continue with a fuller vocational programme can transfer to a BTEC National Diploma or Extended Diploma, for example for their second year.

Some learners are sure of the sector they want to work in and are aiming for progression into that sector via higher education. These learners should be directed to the two-year BTEC National Extended Diploma as the most suitable qualification.

As a centre, you may want to teach learners who are taking different qualifications together. You may also wish to transfer learners between programmes to meet changes in their progression needs. You should check the qualification structures and unit combinations carefully as there is no exact match among the different sizes. You may find that learners need to complete more than the minimum number of units when transferring.

When learners are recruited, you need to give them accurate information on the title and focus of the qualification for which they are studying.

Is there a learner entry requirement?

As a centre it is your responsibility to ensure that learners who are recruited have a reasonable expectation of success on the programme. There are no formal entry requirements but we expect learners to have qualifications at or equivalent to Level 2.

Learners are most likely to succeed if they have:

- five GCSEs at good grades and/or
- BTEC qualification(s) at Level 2
- achievement in English and mathematics through GCSE or Functional Skills.

Learners may demonstrate ability to succeed in various ways. For example, learners may have relevant work experience or specific aptitude shown through diagnostic tests or non-educational experience.

What is involved in becoming an approved centre?

All centres must be approved before they can offer these qualifications – so that they are ready to assess learners and so that we can provide the support that is needed. Further information is given in *Section 8*.

What level of sector knowledge is needed to teach these qualifications?

We do not set any requirements for teachers but expect that centres will assess their overall skills and knowledge of the teaching team to ensure that they are relevant and up to date. This will give learners a rich programme to prepare them for employment in the sector. As part of the requirements of the programme are to involve employers in delivery this should support centres in ensuring that they are following up to date practices when delivering the programme.

What resources are required to deliver these qualifications?

As part of your centre approval you will need to show that the necessary material resources and work spaces are available to deliver BTEC Nationals. For some units, specific resources are required. This is indicated in the units.

How can myBTEC help with planning for these qualifications?

myBTEC is an online toolkit that supports the delivery, assessment and quality assurance of BTECs in centres. It supports teachers with activities, such as choosing a valid combination of units, creating assignment briefs and creating assessment plans. For further information see *Section 10*.

Which modes of delivery can be used for these qualifications?

You are free to deliver BTEC Nationals using any form of delivery that meets the needs of your learners. We recommend making use of a wide variety of modes, including direct instruction in classrooms or work environments, investigative and practical work, group and peer work, private study and e-learning.

What are the requirements for meaningful employer involvement?

Requirements

These BTEC National Extended Certificates in Creative Digital Media Production have been designed as Tech Level qualifications. As an approved centre you are required to ensure that during their study, every learner has access to meaningful activity involving employers. Involvement should be with employers from the creative digital media production sector and should form a significant part of the delivery or assessment of the qualification. Each centre's approach to employer involvement will be monitored in two ways. It will be monitored at centre level in the first term each year as part of the annual quality management review process that addresses centre strategy for delivery, assessment and quality assurance, when we will ask you to show evidence of how employer involvement is provided for all learners. You will need to show evidence in order to gain reporting clearance for certification. It will be monitored also at programme level as part of the standards verification process to confirm that plans for employer involvement meet the requirements of the specification. These approaches are designed to ensure additional activities can be scheduled where necessary so learners are not disadvantaged (see *Section 8 Quality assurance*).

We know that the vast majority of programmes already have established links with employers. In order to give you maximum flexibility in creating and strengthening employer involvement, we have not specified a particular level of input from employers. However, meaningful employer involvement, as defined below, should contribute significantly to at least **one** mandatory unit.

Also there are suggestions in many of the units about how employers could become involved in delivery and/or assessment. These suggestions are not exhaustive and there will be other possibilities at local level.

Employer involvement in these units is subject to verification as part of the standards verification process (see *Section 8*).

Definition

Activities that are eligible to be counted as meaningful engagement are:

- structured work experience or work placements that develop skills and knowledge relevant to the qualification
- projects or assessments set with input from industry practitioners
- masterclasses or guest lectures from industry practitioners
- 'expert witness' reports from practitioners that contribute to the assessment of a learner's work.

There may be other ways in which learners can benefit from contact with employers or prepare for employment, such as listening to careers talks or working in simulated environments. While they provide benefits to learners they do not count as meaningful engagement.

Support

It is important that you give learners opportunities that are high quality and directly relevant to their study. We will support you in this through guidance materials and by giving you examples of best practice.

What support is available?

We provide a wealth of support materials, including curriculum plans, delivery guides, authorised assignment briefs, additional papers for external assessments and examples of marked learner work.

You will be allocated a Standards Verifier early on in the planning stage to support you with planning your assessments. There will be extensive training programmes as well as support from our Subject Advisor team.

For further details see *Section 10*.

How will my learners become more employable through these qualifications?

All BTEC Nationals are mapped to relevant occupational standards (see *Appendix 1*).

In the mandatory content and the selected optional units that focus on technical preparation learners will be acquiring the key knowledge and skills that employers need. Also, employability skills, such as team working and entrepreneurialism, and completing realistic tasks have been built into the design of the learning aims and content. This gives you the opportunity to use relevant contexts, scenarios and materials to enable learners to develop a portfolio of evidence that demonstrates the breadth of their skills and knowledge in a way that equips them for employment.

5 Assessment structure and external assessment

Introduction

BTEC Nationals are assessed using a combination of *internal assessments*, which are set and marked by teachers, and *external assessments* which are set and marked by Pearson:

- mandatory units have a combination of internal and external assessments
- all optional units are internally assessed.

We have taken great care to ensure that the assessment method chosen is appropriate to the content of the unit and in line with requirements from employers and higher education.

In developing an overall plan for delivery and assessment for the programme, you will need to consider the order in which you deliver units, whether delivery is over short or long periods and when assessment can take place. Some units are defined as synoptic units (see *Section 2*). Normally, a synoptic assessment is one that a learner would take later in a programme and in which they will be expected to apply learning from a range of units. Synoptic units may be internally or externally assessed. Where a unit is externally assessed you should refer to the sample assessment materials (SAMs) to identify where there is an expectation that learners draw on their wider learning. For internally-assessed units, you must plan the assignments so that learners can demonstrate learning from across their programme. A unit may be synoptic in one qualification and not another because of the relationship it has to the rest of the qualification.

We have addressed the need to ensure that the time allocated to final assessment of internal and external units is reasonable so that there is sufficient time for teaching and learning, formative assessment and development of transferable skills.

In administering internal and external assessment, the centre needs to be aware of the specific procedures and policies that apply, for example to registration, entries and results. An overview with signposting to relevant documents is given in *Section 7*.

Internal assessment

Our approach to internal assessment for these qualifications will be broadly familiar to experienced centres. It offers flexibility in how and when you assess learners, provided that you meet assessment and quality assurance requirements. You will need to take account of the requirements of the unit format, which we explain in *Section 3*, and the requirements for delivering assessment given in *Section 6*.

External assessment

A summary of the external assessment for this qualification is given in *Section 2*. You should check this information carefully, together with the unit specification and the sample assessment materials, so that you can timetable learning and assessment periods appropriately.

Learners must be prepared for external assessment by the time they undertake it. In preparing learners for assessment you will want to take account of required learning time, the relationship with other external assessments and opportunities for retaking. You should ensure that learners are not entered for unreasonable amounts of external assessment in one session. Learners may resit an external assessment to obtain a higher grade of near pass or above. If a learner has more than one attempt, then the best result will be used for qualification grading, up to the permitted maximum. It is unlikely that learners will need to or benefit from taking all assessments twice so you are advised to plan appropriately. Some assessments are synoptic and learners are likely to perform best if these assessments are taken towards the end of the programme.

Key features of external assessment in creative media digital production

In creative digital media production, after consultation with stakeholders, we have developed the following:

- *Unit 3: Digital Media Skills*: this unit provides validation of the independent use of technical skills which are assessed externally. Learners will undertake a practical activity to produce a media product to a specified brief and in a chosen medium. They will have a defined period of time in which to create, source and construct their product in line with the requirements of the brief.

Units

The externally-assessed units have a specific format, which we explain in *Section 3*. The content of units will be sampled across external assessments over time through appropriate papers and tasks. The ways in which learners are assessed are shown through the assessment outcomes and grading descriptors. External assessments are marked and awarded using the grade descriptors. The grades available are Distinction (D), Merit (M), Pass (P) and Near Pass (N). The Near Pass (N) grade gives learners credit below a Pass, where they have demonstrated evidence of positive performance which is worth more than an unclassified result but not yet at the Pass standard.

Sample assessment materials

Each externally-assessed unit has a set of sample assessment materials (SAMs) that accompanies this specification. The SAMs are there to give you an example of what the external assessment will look like in terms of the feel and level of demand of the assessment. In the case of units containing synoptic assessment, the SAMs will also show where learners are expected to select and apply from across the programme.

The SAMs show the range of possible question types that may appear in the actual assessments and give you a good indication of how the assessments will be structured. While SAMs can be used for practice with learners, as with any assessment the content covered and specific details of the questions asked will change in each assessment.

A copy of each of these assessments can be downloaded from our website. An additional sample of each of the Pearson-set units will be available before the first sitting of the assessment to allow your learners further opportunities for practice.

6 Internal assessment

This section gives an overview of the key features of internal assessment and how you, as an approved centre, can offer it effectively. The full requirements and operational information are given in the *BTEC Quality Assurance Handbook* available on our website. All members of the assessment team need to refer to this document.

For this qualification, it is important that you can meet the expectations of stakeholders and the needs of learners by providing a programme that is practical and applied. You can tailor programmes to meet local needs and use links with local employers and the wider vocational sector.

When internal assessment is operated effectively, it is challenging, engaging, practical and up to date. It must also be fair to all learners and meet national standards.

Principles of internal assessment

Our approach to internal assessment for this qualification is to offer flexibility in how and when you assess learners, provided that you meet assessment and quality assurance requirements. You will need to take account of the requirements of the unit format, which we explain in *Section 3 Units*, and the requirements for delivering assessment, given in *Section 7 Administrative arrangements*.

Operating internal assessment

The assessment team

It is important that there is an effective team for internal assessment so that all assessment is planned and verified. Full information is given in the *BTEC Quality Assurance Handbook*.

The key roles are:

- the Lead Internal Verifier (Lead IV) for the qualification has overall responsibility for the planning, record keeping and standard setting for the qualification. The Lead IV registers with Pearson annually and organises training using our support materials
- Internal Verifiers (IVs) check that assignments and assessment decisions are valid and that they meet our requirements. In a small team all people will normally be assessors and IVs. No one can verify their own actions as an assessor
- assessors set or use assignments to assess learners to national standards.

Planning and record keeping

The Lead IV makes sure that there is a plan for assessment of the internally-assessed units and maintains records of assessment undertaken.

The key records are:

- verification of assignment briefs
- learner authentication declarations
- assessor decisions on assignments, with feedback given to learners
- verification of assessment decisions.

Examples of records and further information are given in the *BTEC Quality Assurance Handbook*.

Effective organisation

Internal assessment needs to be well organised so that learners' progress can be tracked and so that we can monitor that assessment is being carried out in line with national standards. We support you through, for example, providing training materials and sample documentation. Our online myBTEC service can help support you in planning and record keeping. Further information on using myBTEC can be found in *Section 10 Resources and support* and on our website.

To make sure that learners are able to complete assignments on time, it is particularly important that you manage the overall assessment programme and deadlines.

Learner preparation

To ensure that you provide effective assessment tasks for your learners, you need to make sure that they understand their responsibilities for assessment and the centre's arrangements.

From induction onwards, you will want to ensure that learners are motivated to work consistently and independently to achieve the requirements of the qualification. Learners need to understand how assessments are used, the importance of meeting assessment deadlines and that all the work submitted for assessment must be their own.

You will need to explain to learners the requirements of assessment and the expected standard that they need to achieve to attain a grade, how assessments relate to the teaching programme and how they should use and reference source materials, including what would constitute plagiarism. You should also set out your approach to operating assessment, such as how learners must submit work and request extensions.

You are encouraged to employ a range of formative assessment approaches as part of teaching and learning before assessing the units summatively. Formative assessment supports teaching and learning, and should be ongoing throughout the learning process. It enables tutors to enhance learning by giving learners constructive feedback so that they can identify their strengths and weaknesses, and to put measures in place to target areas that need work. To ensure that learners progress, formative assessment approaches that incorporate reflective learning and regular skills assessment are important in encouraging self-development and reflective practice. You can give feedback on the following:

- technique and skills development
- identifying stretch and challenge.

Setting assessments through assignments

For internally-assessed units, an assessment task is defined as the independent production of evidence, by the learner, during a set period. The format of assessment tasks can include practical, written and observed activities.

An assignment provides the context for assessment tasks and should be issued to learners as a vocational scenario with a defined start date, a completion date and clear requirements for the production of evidence. A valid assessment task will enable a clear, summative assessment of outcomes based on the assessment criteria.

An assessment task in an assignment must be a distinct activity, completed independently by learners. It is a separate, more formal activity but can follow on from teaching activities that learners complete with direction from tutors.

When setting your assignments, you need to work with the information given in the *Essential information for assessment decisions* and the *Assessment activity* sections of the units. You can choose to use the suggested scenarios or to adapt them to take account of local circumstances, provided that assignments are verified.

In designing your own assignments you should bear in mind the following points.

- A learning aim must always be assessed as a whole.
- Assessment tasks in assignments must be structured to allow learners to demonstrate the full range of achievement at all grade levels. All learners need to be treated fairly by being given the opportunity to achieve a higher grade if they have the ability.
- Learners should be given clear tasks, activities and structures for evidence, the criteria should not be given as tasks.
- Assessment tasks in assignments provide a final summative assessment of a learning aim.
- Assessment tasks will draw on the specified range of teaching content for the learning aim. The specified teaching content is compulsory. The evidence for assessment need not cover every aspect of the teaching content as learners will normally be given particular examples, case studies or contexts in their assignments. For example, if a learner is carrying out a practical performance, then they must address all the relevant range of content that applies in that instance.

An assignment should have:

- a vocational scenario or context that motivates the learner to apply their learning through the assignment, such as an audience or purpose for which the evidence is being provided
- clear instructions to the learner about what they are required to do, normally set out through a series of tasks.

Forms of evidence

The units allow for a variety of forms of evidence to be used, provided that they are suited to the type of learning aim being assessed. For most units, the practical demonstration of skills is necessary. The units give information on suitable forms of evidence that would give learners the opportunity to apply a range of transferable and sector skills. Centres may choose to use different suitable forms for evidence to those proposed. Overall, learners should be assessed using varied forms of evidence.

The main forms of evidence include:

- projects
- recordings of performance, role play, interviews and practical tasks
- oral or written presentations with assessor questioning
- work logbooks and reflective journals.

It is important to note that an observation record is a source of evidence and does not confer an assessment decision. It must be sufficiently detailed to enable others to make a judgement about the quality and sufficiency of the performance and must document clearly the rationale for the assessment decision. Observation records should be accompanied by supporting evidence, which may take the form of video, audio recordings, photographs, preparation notes, learner logs and other similar types of record.

The form(s) of evidence selected must allow:

- the learner to provide all the evidence required for the learning aim(s) and the associated assessment criteria at all grade levels
- the learner to produce evidence that is their own independent work
- a verifier to independently reassess the learner to check the assessor's decisions.

Centres need to take particular care in ensuring that learners produce independent work.

Making valid assessment decisions

Assessment decisions through applying unit-based criteria

Assessment decisions for this qualification are based on the specific criteria given in each unit and set at each grade level. The way in which individual units are written provides a balance of assessment of sector-specific knowledge, technical and practical skills, and transferable skills appropriate to the purpose of the qualification.

Pass, Merit and Distinction criteria all relate to individual learning aims. The assessment criteria for a unit are hierarchical and holistic where, in satisfying the M criteria, a learner would also have satisfied the P criteria. The unit assessment grid shows the relationships of the criteria so that assessors can apply all the criteria to the learner's evidence at the same time.

Assessors must show how they have reached their decisions using the criteria in the assessment records. When a learner has completed all the assessment for a unit then the assessment team will give a grade for the unit. This is given according to the highest level for which the learner is judged to have met all the criteria. Therefore:

- to achieve a Distinction, a learner must have satisfied all the Distinction criteria (and all the Pass and Merit criteria); these define outstanding performance across the unit as a whole
- to achieve a Merit, a learner must have satisfied all the Merit criteria (and all the Pass criteria) through high performance in each learning aim

- to achieve a Pass, a learner must have satisfied all the Pass criteria for the learning aims, showing coverage of the unit content and therefore attainment at Level 3 of the national framework.

The award of a Pass is a defined level of performance and cannot be given solely on the basis of a learner completing assignments.

Learners who do not satisfy the Pass criteria should be reported as Unclassified.

Making assessment decisions using criteria

Assessors should review authenticated learner work and make judgements on standards using the assessment criteria and the supporting information provided in units and training materials. The evidence from a learner can be judged using all the relevant criteria at the same time. The assessor needs to make a judgement against each criterion that evidence is present and sufficiently comprehensive.

Assessors should use the following information and support in reaching assessment decisions:

- the *Essential information for assessment decisions* section in each unit
- your Lead IV and assessment team's collective experience, supported by the standardisation materials we provide.

Once the team has agreed the outcome, a formal assessment decision is recorded and reported to learners. The information given:

- must show the formal decision and indicate where criteria have been met
- may show where attainment against criteria has not been demonstrated
- avoid giving direct, specific instructions on how the learner can improve the evidence to achieve a higher grade.

Authenticity of learner work

Assessors must ensure that evidence is authentic to a learner through setting valid assessments and supervising them during the assessment period. Assessors must take care not to provide direct input, instructions or specific feedback that may compromise authenticity.

Once an assessment has begun, learners must not be given feedback that relates specifically to their evidence and how it can be improved, learners must work independently.

An assessor must assess only learner work that is authentic, i.e. learners' own independent work. Learners must authenticate the evidence that they provide for assessment through signing a declaration stating that it is their own work. Assessors must complete a declaration that:

- the evidence submitted for this assessment is the learner's own
- the learner has clearly referenced any sources used in the work
- they understand that false declaration is a form of malpractice.

Centres can use Pearson templates or their own templates to document authentication. During assessment, an assessor may suspect that some or all of the evidence from a learner is not authentic. The assessor must then take appropriate action using the centre's policies for malpractice. Further information is given in *Section 8 Administrative arrangements*.

Resubmission of improved evidence

The final assessment of evidence for the relevant learning aims is normally the final assessment decision, except where the Lead IV approves one opportunity to resubmit improved evidence based on the completed assessment.

The Lead IV has the responsibility to make sure that resubmission is operated fairly. This means:

- checking that a learner can be reasonably expected to perform better through a second submission, for example that the learner has not performed as expected
- making sure that giving a further opportunity does not give an unfair advantage over other learners, for example through the opportunity to take account of feedback given to other learners
- checking that the learner will be able to provide improved evidence without further guidance and that the original evidence submitted remains valid.

Once an assessment decision has been given to the learner, the resubmission opportunity must have a deadline within 15 working days in the same academic year. However, we recognise that there are circumstances where the resubmission period may fall outside of the 15-day limit owing to a lack of resources being available, for example where learners may need to access a performance space or have access to specialist equipment. Where it is practical to do so, for example evaluations, presentations, extended writing, resubmission must remain within the normal 15-day period.

For assessment to be fair, it is important that learners are all assessed in the same way and that some learners are not advantaged by having additional time or the opportunity to learn from others. Therefore, learners who did not complete assessment tasks by the planned deadline or by an authorised extension deadline (if one was given for specific circumstances), may not have the opportunity to subsequently resubmit. Similarly, learners who submit work that is not their own should not be given an opportunity to resubmit.

The outcome of any resubmission of the assessment task by the learner is then recorded as the final decision.

A learner who has not achieved their expected level of performance in the relevant learning aims **after resubmission** of an assessment may be offered a single retake opportunity using a new assessment task. The highest grade that may be awarded is a Pass.

The Lead IV must authorise a retake with a new assessment only in exceptional circumstances and where it is necessary, appropriate and fair to do so. For further information on offering a retake opportunity please refer to the *BTEC Centre Guide to Internal Assessment* available on our website. There is information on writing assignments for retakes on our website, see www.btec.co.uk/keydocuments.

7 Administrative arrangements

Introduction

This section focuses on the administrative requirements for delivering a BTEC qualification. It will be of value to Quality Nominees, Lead IVs, Programme Leaders and Examinations Officers.

Learner registration and entry

Shortly after learners start the programme of learning, you need to make sure that they are registered for the qualification and that appropriate arrangements are made for internal and external assessment. You need to refer to the *Information Manual* for information on making registrations for the qualification and entries for external assessments.

Learners can be formally assessed only for a qualification on which they are registered. If learners' intended qualifications change, for example if a learner decides to choose a different pathway specialism, then the centre must transfer the learner appropriately.

Access to assessment

Both internal and external assessments need to be administered carefully to ensure that all learners are treated fairly, and that results and certification are issued on time to allow learners to progress to chosen progression opportunities.

Our equality policy requires that all learners should have equal opportunity to access our qualifications and assessments, and that our qualifications are awarded in a way that is fair to every learner. We are committed to making sure that:

- learners with a protected characteristic are not, when they are undertaking one of our qualifications, disadvantaged in comparison to learners who do not share that characteristic
- all learners achieve the recognition they deserve for undertaking a qualification and that this achievement can be compared fairly to the achievement of their peers.

Further information on access arrangements can be found in the Joint Council for Qualifications (JCQ) document *Access Arrangements, Reasonable Adjustments and Special Consideration for General and Vocational Qualifications*.

Administrative arrangements for internal assessment

Records

You are required to retain records of assessment for each learner. Records should include assessments taken, decisions reached and any adjustments or appeals. Further information can be found in the *Information Manual.* We may ask to audit your records so they must be retained as specified.

Reasonable adjustments to assessment

A reasonable adjustment is one that is made before a learner takes an assessment to ensure that they have fair access to demonstrate the requirements of the assessments. You are able to make adjustments to internal assessments to take account of the needs of individual learners. In most cases this can be achieved through a defined time extension or by adjusting the format of evidence. We can advise you if you are uncertain as to whether an adjustment is fair and reasonable. You need to plan for time to make adjustments if necessary.

Further details on how to make adjustments for learners with protected characteristics are given on our website in the document *Supplementary guidance for reasonable adjustment and special consideration in vocational internally-assessed units.*

Special consideration

Special consideration is given after an assessment has taken place for learners who have been affected by adverse circumstances, such as illness. You must operate special consideration in line with our policy (see previous paragraph). You can provide special consideration related to the period of time given for evidence to be provided or for the format of the assessment if it is equally valid. You may not substitute alternative forms of evidence to that required in a unit, or omit the application of any assessment criteria to judge attainment. Pearson can consider applications for special consideration in line with the policy.

Appeals against assessment

Your centre must have a policy for dealing with appeals from learners. These appeals may relate to assessment decisions being incorrect or assessment not being conducted fairly. The first step in such a policy could be a consideration of the evidence by a Lead IV or other member of the programme team. The assessment plan should allow time for potential appeals after assessment decisions have been given to learners. If there is an appeal by a learner, you must document the appeal and its resolution. Learners have a final right of appeal to Pearson but only if the procedures that you have put in place have not been followed. Further details are given in the document *Enquiries and appeals about Pearson vocational qualifications and end point assessment policy*.

Administrative arrangements for external assessment

Entries and resits

For information on the timing of assessment and entries, please refer to the annual examinations timetable on our website.

Access arrangements requests

Access arrangements are agreed with Pearson before an assessment. They allow students with special educational needs, disabilities or temporary injuries to:

- access the assessment
- show what they know and can do without changing the demands of the assessment.

Access arrangements should always be processed at the time of registration. Learners will then know what type of arrangements are available in place for them.

Granting reasonable adjustments

For external assessment, a reasonable adjustment is one that we agree to make for an individual learner. A reasonable adjustment is defined for the individual learner and informed by the list of available access arrangements.

Whether an adjustment will be considered reasonable will depend on a number of factors to include:

- the needs of the learner with the disability
- the effectiveness of the adjustment
- the cost of the adjustment; and
- the likely impact of the adjustment on the learner with the disability and other learners.

Adjustment may be judged unreasonable and not approved if it involves unreasonable costs, timeframes or affects the integrity of the assessment.

Special consideration requests

Special consideration is an adjustment made to a student's mark or grade after an external assessment to reflect temporary injury, illness or other indisposition at the time of the assessment. An adjustment is made only if the impact on the learner is such that it is reasonably likely to have had a material effect on that learner being able to demonstrate attainment in the assessment.

Centres are required to notify us promptly of any learners who they believe have been adversely affected and request that we give special consideration. Further information can be found in the special requirements section on our website.

Conducting external assessments

Centres must make arrangements for the secure delivery of external assessments. External assessments for BTEC qualifications include examinations, set tasks and performance.

Each external assessment has a defined degree of control under which it must take place. Some external assessments may have more than one part and each part may have a different degree of control. We define degrees of control as follows.

High control

This is the completion of assessment in formal invigilated examination conditions.

Medium control

This is completion of assessment, usually over a longer period of time, which may include a period of controlled conditions. The controlled conditions may allow learners to access resources, prepared notes or the internet to help them complete the task.

Low control

These are activities completed without direct supervision. They may include research, preparation of materials and practice. The materials produced by learners under low control will not be directly assessed.

Further information on responsibilities for conducting external assessment is given in the document *Instructions for Conducting External Assessments*, available on our website.

Dealing with malpractice in assessment

Malpractice means acts that undermine the integrity and validity of assessment, the certification of qualifications, and/or that may damage the authority of those responsible for delivering the assessment and certification.

Pearson does not tolerate actions (or attempted actions) of malpractice by learners, centre staff or centres in connection with Pearson qualifications. Pearson may impose penalties and/or sanctions on learners, centre staff or centres where incidents (or attempted incidents) of malpractice have been proven.

Malpractice may arise or be suspected in relation to any unit or type of assessment within the qualification. For further details regarding malpractice and advice on preventing malpractice by learners, please see Pearson's *Centre guidance: Dealing with malpractice and maladministration in vocational qualifications*, available on our website.

The procedures we ask you to adopt vary between units that are internally-assessed and those that are externally assessed.

Internally-assessed units

Centres are required to take steps to prevent malpractice and to investigate instances of suspected malpractice. Learners must be given information that explains what malpractice is for internal assessment and how suspected incidents will be dealt with by the centre. The *Centre Guidance: Dealing with Malpractice* document gives full information on the actions we expect you to take.

Pearson may conduct investigations if we believe that a centre is failing to conduct internal assessment according to our policies. The above document gives further information, examples and details the penalties and sanctions that may be imposed.

In the interests of learners and centre staff, centres need to respond effectively and openly to all requests relating to an investigation into an incident of suspected malpractice.

Externally-assessed units

External assessment means all aspects of units that are designated as external in this specification, including preparation for tasks and performance. For these assessments centres, must follow the JCQ procedures set out in the latest version of *JCQ Suspected Malpractice in Examinations and Assessments Policies and Procedures* (www.jcq.org.uk).

In the interests of learners and centre staff, centres need to respond effectively and openly to all requests relating to an investigation into an incident of suspected malpractice.

Learner malpractice

Heads of Centres are required to report incidents of any suspected learner malpractice that occur during Pearson external assessments. We ask that centres do so by completing a *JCQ Form M1* (available at www.jcq.org.uk/exams-office/malpractice) and emailing it and any accompanying documents (signed statements from the learner, invigilator, copies of evidence, etc.) to the Investigations Team at candidatemalpractice@pearson.com. The responsibility for determining appropriate sanctions or penalties to be imposed on learners lies with Pearson.

Learners must be informed at the earliest opportunity of the specific allegation and the centre's malpractice policy, including the right of appeal. Learners found guilty of malpractice may be disqualified from the qualification for which they have been entered with Pearson.

Teacher/centre malpractice

Heads of Centres are required to inform Pearson's Investigations Team of any incident of suspected malpractice by centre staff, before any investigation is undertaken. Heads of centres are requested to inform the Investigations Team by submitting a *JCQ Form M2(a)* (available at www.jcq.org.uk/exams-office/malpractice) with supporting documentation to pqsmalpractice@pearson.com. Where Pearson receives allegations of malpractice from other sources (for example Pearson staff or anonymous informants), the Investigations Team will conduct the investigation directly or may ask the head of centre to assist.

Incidents of maladministration (accidental errors in the delivery of Pearson qualifications that may affect the assessment of learners) should also be reported to the Investigations Team using the same method.

Heads of Centres/Principals/Chief Executive Officers or their nominees are required to inform learners and centre staff suspected of malpractice of their responsibilities and rights; see Section 6.15 of the *JCQ Suspected Malpractice in Examinations and Assessments Policies and Procedures* document.

Pearson reserves the right in cases of suspected malpractice to withhold the issuing of results and/or certificates while an investigation is in progress. Depending on the outcome of the investigation results and/or certificates may be released or withheld.

You should be aware that Pearson may need to suspend certification when undertaking investigations, audits and quality assurances processes. You will be notified within a reasonable period of time if this occurs.

Sanctions and appeals

Where malpractice is proven we may impose sanctions or penalties.

Where learner malpractice is evidenced, penalties may be imposed such as:

- mark reduction for external assessments
- disqualification from the qualification
- being barred from registration for Pearson qualifications for a period of time.

If we are concerned about your centre's quality procedures we may impose sanctions such as:

- working with you to create an improvement action plan
- requiring staff members to receive further training
- placing temporary blocks on your certificates
- placing temporary blocks on registration of learners
- debarring staff members or the centre from delivering Pearson qualifications
- suspending or withdrawing centre approval status.

The centre will be notified if any of these apply.

Pearson has established procedures for centres that are considering appeals against penalties and sanctions arising from malpractice. Appeals against a decision made by Pearson will normally be accepted only from Heads of Centres (on behalf of learners and/or members of staff) and from individual members (in respect of a decision taken against them personally). Further information on appeals can be found in our *Enquiries and appeals about Pearson vocational qualifications and end point assessment policy*, which is on our website. In the initial stage of any aspect of malpractice, please notify the Investigations Team by email via pqsmalpractice@pearson.com who will inform you of the next steps.

Certification and results

Once a learner has completed all the required components for a qualification, even if final results for external assessments have not been issued, then the centre can claim certification for the learner, provided that quality assurance has been successfully completed. For the relevant procedures please refer to our *Information Manual*. You can use the information provided on qualification grading to check overall qualification grades.

Results issue

After the external assessment session, learner results will be issued to centres. The result will be in the form of a grade. You should be prepared to discuss performance with learners, making use of the information we provide and post-results services.

Post-assessment services

Once results for external assessments are issued, you may find that the learner has failed to achieve the qualification or to attain an anticipated grade. It is possible to transfer or reopen registration in some circumstances. The *Information Manual* gives further information.

Changes to qualification requests

Where a learner who has taken a qualification wants to resit an externally-assessed unit to improve their qualification grade, you firstly need to decline their overall qualification grade. You may decline the grade before the certificate is issued. For a learner receiving their results in August, you should decline the grade by the end of September if the learner intends to resit an external assessment.

Additional documents to support centre administration

As an approved centre you must ensure that all staff delivering, assessing and administering the qualifications have access to this documentation. These documents are reviewed annually and are reissued if updates are required.

- *Pearson Quality Assurance Handbook*: this sets out how we will carry out quality assurance of standards and how you need to work with us to achieve successful outcomes.
- *Information Manual*: this gives procedures for registering learners for qualifications, transferring registrations, entering for external assessments and claiming certificates.
- *Lead Examiners' Reports*: these are produced after each series for each external assessment and give feedback on the overall performance of learners in response to tasks or questions set.
- *Instructions for the Conduct of External Assessments (ICEA)*: this explains our requirements for the effective administration of external assessments, such as invigilation and submission of materials.
- *Regulatory policies*: our regulatory policies are integral to our approach and explain how we meet internal and regulatory requirements. We review the regulated policies annually to ensure that they remain fit for purpose. Policies related to this qualification include:
  - adjustments for candidates with disabilities and learning difficulties, access arrangements and reasonable adjustments for general and vocational qualifications
  - age of learners
  - centre guidance for dealing with malpractice
  - recognition of prior learning and process.

This list is not exhaustive and a full list of our regulatory policies can be found on our website.

8 Quality assurance

Centre and qualification approval

As part of the approval process, your centre must make sure that the resource requirements listed below are in place before offering the qualification.

- Centres must have appropriate physical resources (for example, equipment, IT, learning materials, teaching rooms) to support the delivery and assessment of the qualification.
- Staff involved in the assessment process must have relevant expertise and/or occupational experience.
- There must be systems in place to ensure continuing professional development for staff delivering the qualification.
- Centres must have in place appropriate health and safety policies relating to the use of equipment by learners.
- Centres must deliver the qualification in accordance with current equality legislation.
- Centres should refer to the teacher guidance section in individual units to check for any specific resources required.

Continuing quality assurance and standards verification

On an annual basis, we produce the *Pearson Quality Assurance Handbook.* It contains detailed guidance on the quality processes required to underpin planning for delivery including appropriate employer involvement, and for robust assessment and internal verification.

The key principles of quality assurance are that:

- a centre delivering BTEC programmes must be an approved centre, and must have approval for the programmes or groups of programmes that it is delivering
- the centre agrees, as part of gaining approval, to abide by specific terms and conditions around the effective delivery and quality assurance of assessment; it must abide by these conditions throughout the period of delivery
- Pearson makes available to approved centres a range of materials and opportunities, through online standardisation, intended to exemplify the processes required for effective assessment, and examples of effective standards. Approved centres must use the materials and services to ensure that all staff delivering BTEC qualifications keep up to date with the guidance on assessment
- an approved centre must follow agreed protocols for standardisation of assessors and verifiers, for the planning, monitoring and recording of assessment processes, and for dealing with special circumstances, appeals and malpractice.

The approach of quality-assured assessment is through a partnership between an approved centre and Pearson. We will make sure that each centre follows best practice and employs appropriate technology to support quality-assurance processes, where practicable. We work to support centres and seek to make sure that our quality-assurance processes do not place undue bureaucratic processes on centres. We monitor and support centres in the effective operation of assessment and quality assurance.

The methods we use to do this for BTEC Level 3 include:

- making sure that all centres complete appropriate declarations at the time of approval
- undertaking approval visits to centres
- making sure that centres have effective teams of assessors and verifiers who are trained to undertake assessment
- undertaking an overarching review and assessment of a centre's strategy for ensuring sufficient and appropriate engagement with employers at the beginning of delivery of any BTEC programme(s)
- undertaking a review of the employer involvement planned at programme level to ensure its appropriateness at a time when additional activities can be scheduled where necessary
- assessment sampling and verification, through requested samples of assessments, completed assessed learner work and associated documentation
- an overarching review and assessment of a centre's strategy for delivering and quality assuring its BTEC programmes, for example making sure that synoptic units are placed appropriately in the order of delivery of the programme.

Centres that do not fully address and maintain rigorous approaches to delivering, assessing and quality assurance cannot seek certification for individual programmes or for all BTEC Level 3 programmes. An approved centre must make certification claims only when authorised by us and strictly in accordance with requirements for reporting.

Centres that do not comply with remedial action plans may have their approval to deliver qualifications removed.

9 Understanding the qualification grade

Awarding and reporting for the qualification

This section explains the rules that we apply in awarding a qualification and in providing an overall qualification grade for each learner. It shows how all the qualifications in this sector are graded.

The awarding and certification of these qualifications will comply with regulatory requirements.

Eligibility for an award

In order to be awarded a qualification, a learner must complete all units, achieve a Near Pass (N) or above in all external units and a pass or above in all mandatory units unless otherwise specified. Refer to the structure in *Section 2*.

To achieve any qualification grade, learners must:

- complete and **have an outcome** (D, M, P, N or U) for all units within a valid combination
- achieve the **required units at pass or above** shown in *Section 2*, and for the Diploma achieve a minimum of 600 GLH and Extended Diploma achieve a minimum 900 GLH at Pass or above (or N or above in external units)
- achieve the **minimum number of points** at a grade threshold.

It is the responsibility of a centre to ensure that a correct unit combination is adhered to. Learners who do not achieve the required minimum grade (N or P) in units shown in the structure will not achieve a qualification.

Learners who do not achieve sufficient points for a qualification or who do not achieve all the required units may be eligible to achieve a smaller qualification in the same suite provided they have completed and achieved the correct combination of units and met the appropriate qualification grade points threshold.

Calculation of the qualification grade

The final grade awarded for a qualification represents an aggregation of a learner's performance across the qualification. As the qualification grade is an aggregate of the total performance, there is some element of compensation in that a higher performance in some units may be balanced by a lower outcome in others.

In the event that a learner achieves more than the required number of optional units, the mandatory units along with the optional units with the highest grades will be used to calculate the overall result, subject to the eligibility requirements for that particular qualification title.

BTEC Nationals are Level 3 qualifications and are awarded at the grade ranges shown in the table below.

Qualification	Available grade range
Certificate, Extended Certificate, Foundation Diploma	P to D*
Diploma	PP to D*D*
Extended Diploma	PPP to D*D*D*

The *Calculation of qualification grade* table, shown further on in this section, shows the minimum thresholds for calculating these grades. The table will be kept under review over the lifetime of the qualification. The most up to date table will be issued on our website.

Pearson will monitor the qualification standard and reserves the right to make appropriate adjustments.

Learners who do not meet the minimum requirements for a qualification grade to be awarded will be recorded as Unclassified (U) and will not be certificated. They may receive a Notification of Performance for individual units. The *Information Manual* gives full information.

Points available for internal units

The table below shows the number of **points** available for internal units. For each internal unit, points are allocated depending on the grade awarded.

	Unit size	
	60 GLH	**90 GLH**
U	0	0
Pass	6	9
Merit	10	15
Distinction	16	24

Points available for external units

Raw marks from the external units will be awarded **points** based on performance in the assessment. The table below shows the **minimum number of points** available for each grade in the external units.

	Unit size	
	90 GLH	**120 GLH**
U	0	0
Near Pass	6	8
Pass	9	12
Merit	15	20
Distinction	24	32

Pearson will automatically calculate the points for each external unit once the external assessment has been marked and grade boundaries have been set. For more details about how we set grade boundaries in the external assessment please go to our website.

Claiming the qualification grade

Subject to eligibility, Pearson will automatically calculate the qualification grade for your learners when the internal unit grades are submitted and the qualification claim is made. Learners will be awarded qualification grades for achieving the sufficient number of points within the ranges shown in the relevant *Calculation of qualification grade* table for the cohort.

Calculation of qualification grade

Applicable for registration from 1 September 2018.

Extended Certificate		Foundation Diploma		Diploma		Extended Diploma	
360 GLH		**510 GLH**		**720 GLH**		**1080 GLH**	
Grade	**Points threshold**	**Grade**	**Points threshold**	**Grade**	**Points threshold**	**Grade**	**Points threshold**
U	0	U	0	U	0	U	0
P	36	P	51	PP	72	PPP	108
				MP	88	MPP	124
						MMP	140
M	52	M	73	MM	104	MMM	156
				DM	124	DMM	176
						DDM	196
D	74	D	104	DD	144	DDD	216
				D*D	162	D*DD	234
						D*D*D	252
D*	90	D*	130	D*D*	180	D*D*D*	270

The table is subject to review over the lifetime of the qualification. The most up-to-date version will be issued on our website.

Examples of grade calculations based on table applicable to registrations from September 2018

Example 1: Achievement of a BTEC Level 3 National Extended Certificate in Digital Film and Video Production with a P grade

	GLH	Type (Int/Ext)	Grade	Unit points
Unit 3	120	Ext	Pass	12
Unit 10	60	Int	Pass	6
Unit 18	60	Int	Merit	10
Unit 21	60	Int	Unclassified	0
Unit 35	60	Int	Merit	10
Totals	**360**		**P**	**38**

The learner has achieved N or higher in Unit 3 and P or higher in Unit 10.

The learner has sufficient points for a P grade.

Example 2: Achievement of a BTEC National Level 3 Extended Certificate in Digital Content Production with a M grade

	GLH	Type (Int/Ext)	Grade	Unit points
Unit 3	120	Ext	Near Pass	8
Unit 14	60	Int	Merit	10
Unit 12	60	Int	Distinction	16
Unit 26	60	Int	Distinction	16
Unit 30	60	Int	Distinction	16
Totals	**360**		**M**	**66**

The learner has sufficient points for a M grade.

Example 3: An Unclassified Result for a BTEC National Level 3 Extended Certificate in Digital Games Production

	GLH	Type (Int/Ext)	Grade	Unit points
Unit 3	120	Ext	Merit	20
Unit 13	60	Int	Unclassified	0
Unit 32	60	Int	Distinction	16
Unit 40	60	Int	Merit	10
Unit 42	60	Int	Distinction	16
Totals	**360**		**U**	**62**

The learner has a U in Unit 10.

The learner has sufficient points for an M grade but has not met the minimum requirement for an N or higher in Unit 3 and P or higher in Unit 10.

10 Resources and support

Our aim is to give you a wealth of resources and support to enable you to deliver BTEC National qualifications with confidence. On our website you will find a list of resources to support teaching and learning, and professional development.

Support for setting up your course and preparing to teach

Specification

This **specification** (for teaching from September 2018) includes details on the administration of qualifications and information on all the units for the qualification.

Delivery Guide

This free guide gives you important advice on how to choose the right course for your learners and how to ensure you are fully prepared to deliver the course. It explains the key features of BTEC Nationals (for example employer involvement and employability skills). It also covers guidance on assessment (internal and external) and quality assurance. The guide tells you where you can find further support and gives detailed unit-by-unit delivery guidance. It includes teaching tips and ideas, assessment preparation and suggestions for further resources.

Schemes of work

Free sample schemes of work are provided for each mandatory unit. These are available in Word™ format for ease of customisation.

Curriculum models

These show how the BTECs in the suite fit into a 16–19 study programme, depending on their size and purpose. The models also show where other parts of the programme, such as work experience, maths and English, tutorial time and wider study, fit alongside the programme.

Study skills activities

A range of case studies and activities is provided; they are designed to help learners develop the study skills they need to successfully complete their BTEC course. The case studies and activities are provided in Word™ format for easy customisation.

myBTEC

myBTEC is a free, online toolkit that lets you plan and manage your BTEC provision from one place. It supports the delivery, assessment and quality assurance of BTECs in centres and supports teachers with the following activities:

- checking that a programme is using a valid combination of units
- creating and verifying assignment briefs (including access to a bank of authorised assignment briefs that can be customised)
- creating assessment plans and recording assessment decisions
- tracking the progress of every learner throughout their programme.

To find out more about myBTEC, visit the myBTEC page on the support services section of our website. We will add the new BTEC National specifications to myBTEC as soon as possible.

Support for teaching and learning

Pearson Learning Services provides a range of engaging resources to support BTEC Nationals, including:

- textbooks in e-book and print formats
- revision guides and revision workbooks in e-book and print formats
- teaching and assessment packs, including e-learning materials via the Active Learn Digital Service.

Teaching and learning resources are also available from a number of other publishers. Details of Pearson's own resources and of all endorsed resources can be found on our website.

Support for assessment

Sample assessment materials for externally-assessed units

Sample assessments are available for the Pearson-set units. One copy of each of these assessments can be downloaded from the website/available in print. For each suite an additional sample for one of the Pearson-set units is also available, allowing your learners further opportunities for practice.

Further sample assessments will be made available through our website on an ongoing basis.

Sample assessment materials for internally-assessed units

We do not prescribe the assessments for the internally-assessed units. Rather, we allow you to set your own, according to your learners' preferences and to link with your local employment profile.

We do provide a service in the form of Authorised Assignment Briefs, which are approved by Pearson Standards Verifiers. They are available via our website or free on myBTEC.

Sample marked learner work

To support you in understanding the expectation of the standard at each grade, examples of marked learner work at PM/MD grades are linked to the Authorised Assignment Briefs.

Training and support from Pearson

People to talk to

There are many people who are available to support you and provide advice and guidance on delivery of your BTEC Nationals. These include:

- Subject Advisors – available for all sectors. They understand all Pearson qualifications in their sector and so can answer sector-specific queries on planning, teaching, learning and assessment
- Standards Verifiers – they can support you with preparing your assignments, ensuring that your assessment plan is set up correctly, and support you in preparing learner work and providing quality assurance through sampling
- Curriculum Development Managers (CDMs) – they are regionally based and have a full overview of the BTEC qualifications and of the support and resources that Pearson provides. CDMs often run network events
- Customer Services – the 'Support for You' section of our website gives the different ways in which you can contact us for general queries. For specific queries, our service operators can direct you to the relevant person or department.

Training and professional development

Pearson provides a range of training and professional development events to support the introduction, delivery, assessment and administration of BTEC National qualifications. These sector-specific events, developed and delivered by specialists, are available both face to face and online.

'Getting Ready to Teach'

These events are designed to get teachers ready for delivery of the BTEC Nationals. They include an overview of the qualifications' structures, planning and preparation for internal and external assessment, and quality assurance.

Teaching and learning

Beyond the 'Getting Ready to Teach' professional development events, there are opportunities for teachers to attend sector- and role-specific events. These events are designed to connect practice to theory; they provide teacher support and networking opportunities with delivery, learning and assessment methodology.

Details of our training and professional development programme can be found on our website.

Appendix 1 Links to industry standards

BTEC Nationals have been developed in consultation with industry and appropriate sector bodies to ensure that the qualification content and approach to assessment aligns closely to the needs of employers. Where they exist, and are appropriate, National Occupational Standards (NOS) and professional body standards have been used to establish unit content.

In the creative digital media production sector, the following approach has been used:

- the mandatory content of *Unit 3: Digital Media Skills* has been developed in line with the NOS to reflect the essential skills and knowledge needed for entry to employment.

Appendix 2 Glossary of terms used for internally-assessed units

This is a summary of the key terms used to define the requirements in the units.

Term	Definition
Accomplished	Demonstrate skills, expertise and mastery of activity or equipment.
Accurate	Perform a task with precision and without error.
Analyse	Outcome of methodical and detailed examination breaking down a topic to interpret and study the interrelationships between the parts. Analysis can be through activity, practice written or verbal presentation.
Apply	Learners use or exercise knowledge or skills in a new or different situation.
Carry out	To undertake a project or task or action.
Collaborate	Work jointly with others.
Competent	Having the necessary knowledge or skill to do something suitably or sufficiently in amount or extent.
Comprehensive	Full, covering a range of factors related to goals, briefs or objectives.
Confident	Demonstrate secure application of skills or processes.
Create	Skills to make or do something, for example a design for a website or edited film sequence.
Creative	Using techniques, equipment and processes to express ideas or feelings in new ways.
Define	State or describe the nature, scope or meaning of a subject as objective facts.
Demonstrate	Carry out and apply knowledge, understanding and/or skills in a practical situation.
Describe	Give a clear account that includes all the relevant features and characteristics – 'painting a picture with words'.
Design	To plan, draw, sketch, outline, invent, formulate or fabricate an idea or piece of work.
Develop	Learners grow or progress a plan, skills and understanding.
Discuss	Consider different aspects of a topic and how they interrelate, and the extent to which they are important.
Diverse	A variety of, to show a complete range.
Effective	Show control over techniques, equipment and processes to efficiently meet the details and broad aims of a requirement.
Evaluate	Drawing on varied information, themes or concepts to consider aspects such as strengths, weaknesses, alternative actions, relevance or significance. Inquiries lead to a supported judgement showing relationship to its context, often in a conclusion.
Examine	Knowledge with application where learners are expected to select and apply knowledge to less familiar contexts.
Explain	Work shows clear details and gives reasons and/or evidence to support an opinion, view or argument. Learners can show comprehension of origins, functions and objectives of a subject and its suitability for purpose.
Explore	Skills and/or knowledge involving practical research or testing.
Imaginative	Develop ideas and concepts in new, engaging and inventive ways.

Term	Definition
Investigate	Learners' work explores techniques, processes, and materials through practical exploration.
Justify	Give reasons or evidence to support an opinion or prove something right or reasonable.
Prepare	Learners make something ready for use or consideration.
Produce	To make, assemble, process, create something from component parts.
Reflect	Think carefully and review information and/or performance – includes articulating ideas, concepts, activities, findings or features.
Review	Appraising existing information or reflecting on events with the intention of instituting change if necessary.
Select	Learners choose the best or most suitable option, whether this is of materials, techniques, equipment or processes. The options and choices should be based on specific criteria.
Source	Obtain something from a particular location.
Synthesising	Make something by the combination of components or elements to form a connected whole.
Understand	Interpret or view something in a particular way.

This is a key summary of the types of evidence used for BTEC Nationals.

Type of evidence	Definition and purpose
Case study	A specific example to which all learners must select and apply knowledge. Used to show application to a realistic context where direct experience cannot be gained.
Development log	A record kept by learners to show the process of development. Used to show method, self-management and skill development.
Group task	Learners work together to produce a final outcome.
Portfolio	A set of creative pieces of work intended to demonstrate learners' abilities.
Practical task	Learners undertake a defined or self-defined task to produce an outcome.
Presentation	Learners demonstrate tasks orally or through practical demonstration.
Project	A large-scale activity requiring self-direction of selection of outcome, planning, research, exploration, outcome and review.
Written task	Individual completion of a task in a work-related format, for example a set of instructions, giving information.

Pearson
BTEC Level 3 Nationals
in
Creative Digital Media Production

Extended Certificate in Creative Digital Media Production

Extended Certificates in:
Digital Film and Video Production
Digital Content Production
Digital Games Production

Foundation Diploma in Creative Digital Media Production

Diplomas in:
Film and Television Production
Film and Television Visual Effects
Digital Publishing
Digital Games Design and Development
Sound Production

Extended Diploma in Creative Digital Media Production

First teaching from September 2018

First certification from 2019

9 781446 948064